

FRIDAY, MARCH 10, 1876.

Contributions.

Mr. Buel's Interlocking Switches and Signals.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Mr. Buel has doubtless added a valuable chapter to the sci-Mr. Buel has doubtless added a valuable chapter to the science of railroad operating, and that, too, upon a branch of the service to which, whatever attention or study may have been given, but few mechanical contrivances have been applied producins so marked a degree of safety as to attract general attention, nor has there, I beheve, been anything proposed approaching in importance that of the interlocking system as applied to the working of switches and the signals which are designed to protect them from causing accident, on a large proportion of all European roads; while in England an act of Parliament requires all roads of importance to use some system of inament requires all roads of importance to use some system of interlocking switch and signal levers, subject to the approval of the "Board of Trade;" in consideration of which it is truly a matter of surprise that only two companies have taken ac-tive measures toward the introduction and perfection of the intive measures toward the introduction and perfection of the interlocking system in this land of 75,000 miles of rallroad—surely a broad field, first for the establishment of the fact that life and property will be less liable to destruction, and again for inventive minds to evolve the simplest means compatible with the requirements of certainty of action at all times and under all circumstances for effecting desirable results. Mr. Buel's ability to master the subject is so apparent that it is hoped a request to further elucidate the principles involved, and bring order and harmony out of the present confusion and discord existing in the practices of rallway managements of this important duty, will be at his earliest convenience complied with: portant duty, will be at his earliest convenience and should each effort of his be subjected t nce complied with;

no severer criticism than the one issued in your impression of Friday, Feb. 11, it will probably be for himself a "satisfaction," and for the railroads throughout the country a valuable service may be done.

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address

The principal and perhaps only element to which criticism will be directed is the use of electricity; and that, too, from the large and eminently influential body of practical men who as yet retain a distrust of the electric current for the performance of so important a duty as changing or transmitting signals over distances so short that it may be done by means of a lever and connections which appeal directly to the senses; and while there can be no question that the consciousness of the electric fluid or curthe consciousness of the electric mind or cur-rent passing along or through a suitable con-ductor and accomplishing prearranged results is decidedly satisfactory to the educated electri-cian, or even novice, yet by the man accustomed to deal with the large masses of matter com-prising railroad plant, the application of a grosser medium than is generally used and a less subtle element than electricity—something of which a comparative estimate may be made with the use of the eye only, is usually be-lieved to be more likely to attain the desired

wint the use of the eye only, is usually believed to be more likely to attain the desired end.

The effort to diminish the number of levers to which a part of the signalman's attention would be given seems to be good reasoning from a theoretical point of view, while the reduction of first cost seems to be practical reasoning (to which commend us—not the "reason" but the "reduction") for making earnest endeavors to eliminate a number of levers from the signal cabin; providing, of course, the efficiency of the apparatus is in no manner interfered with. In order to obviate the necessity of employing two levers for each switch it is proposed to operate the switch and lock, as shown by the accompanying sketch, of which the following is a description:

"A is the sliding bar supported by the guides, B, B, to preserve its rectilinear motion, provided with the slots, G, H, B, the former of which (slot G) connects one end of the boll Grauk, I, by means of pin, J, and the latter slots, H, H, are employed for operating the vertical reciprocating blocks, K, K, being secured thereto by means of pins, L, L. M is a pin located in bell crank I, and upon which the said crank oscillates, and said crank is provided with another pin, N, to which is attached the rod, O, leading from rails, P, P. The blocks, K, K, are secured in a vertical position by the guides, R, R. The operation is as follows: Supposing the bar, A, to stand as shown in drawing, the rails, P, P, appear at the end of its position in one direction, and the blocks, K, K, at the back of said rails. Now, by moving the bar, A, in the direction of the arrow, the pins, L, L, in connection with blocks, K, K, are made to descend by the inclined portion of that end of slots, H, H, while at the same time the straight portion at one chd of slot, G, is presented to pin, J; therefore the belt crank has no motion until the said pin, J, strikes the inclined portion of slot G, when it begins to ascend, carrying with that end of the said belt crank, shifting the rails to the opposit

This would reduce the number of levers by one half, or, as in the case mentioned where 24 levers are used, only 10 would be needed if signals can be safely worked by electricity as propos-

ed by Mr. Buel, or, if deemed best, as your correspondent believes, to operate signals with separate levers, only 14 would be needed instead of 24. Consequently, as Mr. Buel states, the interlocking would be less complicated, and to such an extent that the switch-lock lever would be the lever upon which the interlocking was effected, and as yet preferably by mechanical appliances, while electricity might be judiciously employed as a tell-tale to keep the signalman informed as to the position of switches and signals in case of fog or other obstruction to vision. Or, what is of far greater importance and entirely neglected by Mr. Buel, it may be made to prevent the removing of the switch lock, much less the rail, and thus preclude the possibility of the switch being moved during the transit of trains, which might be accomplished by the train in passing opening or closing a circuit as may be best. This is well done by English engineers with a very simple mechanical contrivance, suggested, I believe, by the familiar example of the parallel ruler. the parallel ruler.

Serious accidents have occurred resulting from the facility with which the points may be moved, during the passage of any train. Mr. B. would evidently find also that "advantages of the most pronounced character would result from the use of a reliable means for preventing accidents caused by the fore-

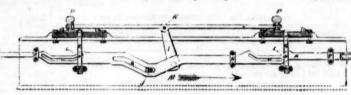
In regard to the conditions cited by Mr. Buel and considered in the same order:

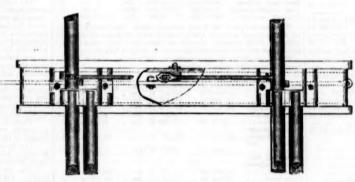
a. "There must be no uncertainty in the method of closing the circuits." Granted all that is claimed by him, if not disproved by what follows:

disproved by what follows:

b. "The mechanism which actuates the signal must be strong and durable," and as opposed to his views for the fulfilling of the condition it is respectfully submitted that a signal of flannel working in a glass case and by electricity cannot be, when erected in exposed positions, made as strong and durable in proportion to the amount of material used as it may be if worked by a connecting rod or even cable.

c and d. "The battery must be properly proportioned and maintained." "The regular winding of weight."





It may be properly proportioned, but "maintained" means constant attention and frequent renewals, while it is maintained that the amount of attention required in excess of what would be needed by the use of the "primitive" lever would not be offset by the reduction of the signal levers. As to the winding up of weight, it is believed to be superfluous, as a signal may be so arranged as to occupy, by its force of gravity, the normal or danger side, and be set at "line clear" by a simple movement of signal lever, requiring but little skill to manipulate. manipulate.

manipulate.

e. The integrity of the "wires must be preserved," which implies expensive construction and maintenance, as opposed to the simpler contrivance of the lever and connecting rod.

To conclude with the considerations as stated by Mr. Buel:

I. does not seem to hold good, inasmuch as a reduction of the number of signal levers in the cabin is at the expense of an increased number of parts elsewhere, and no less objectionable.

II., III., IV. are believed to be approximately correct, and here is something in all this.

S. H. Finch.

New York, February, 1876.

The Southern Pacific and the Central Pacific.

WASHINGTON, D. C., Feb. 16, 1876.

WASHINGTON, D. C., Feb. 16, 1876.
TO THE EDITOR OF THE RAILBOAD GAZETTE:

My attention was called yesterday to a letter published in your paper of the 11th inst., evidently official, from the office of the Southern Pacific Railroad Company of California, over the signature of the Secretary of that company. The letter commences very properly with the name of Mr. C. P. Huntington, and calls attention to the truthful, gentle and modest qualities of the distinguished Vice-President of the Central Pacific Railroad Company, in a way creditable alike to the head and heart of the evidently admiring Secretary, who appears to have doubts, however, as to the possession of those high qualities by any one else.

by any one else.

The letter is full of fact and fiction, jumbled together in inextricable confusion, of representations and misconceptions, of bad geography and worse typography, of disingenuousness and

even untruthfulness, so that it would be almost impossible to explain in detail the several matters touched upon within the reasonable limits of a newspaper article.

The mixed character of these statements reminds me very much of recent statements before the House Committee on the Pacific Railroads, in reply to certain questions asked by that committee, as follows—(I quote from the official report printed for the use of the committee):

"Mr. Atkins, of the committee, proposed the following interrogatories to Mr. Huntington:

"Q. What are the names of the officers and directors of the Contract & Finance Company?

"A. I cannot tell you. Mr. Doty was President. Judge Brown, at my side here, is recently from there, and he says that the Contract & Finance Company have gone out of business.

Q. And you don't recollect their names?

A. No, I do not. Perhaps Judge Brown could tell you. Mr. Doty was President, I think. I have not been much on the other coast for ten or fifteen years.

Q. Then the gentleman does not recollect any of them except Mr. Doty.

A. Well, Judge Brown says that Mr. Doty is not President now.

Q. What I want to know is, the names of the President and

A. Well, Judge Brown says that Mr. Doty is not President now.

Q. What I want to know is, the names of the President and the officers of the Contract and Finance Company?

A. I cannot give them to you. I think I have heard them but, it is a matter that I have had nothing to do with.

Q. What are the names of the officers and directors of the Western Development Company?

A. Mr. Doty is the President of that. I cannot tell you who the directors are. Do you know, Judge Brown?

Judge Brown.—I do not.

Q. How has the Southern Pacific Railroad been constructed.

A. By putting down steel rails. They are doing some very excellent work. They are putting down some red-wood ties which are very durable.

Q. What company or companies have undertaken to build it, and what price per mile is to be paid, in stock, bonds, or othererwise?

Q. What company or companies have undertaken to build it, and what price per mile is to be paid, in stock, bonds, or othererwise?

A. I cannot tell you. The Western Development Company, as I understand, took the bonds of the company and a portion of the stock. I think a large portion of the stock, but I do not know. I have not seen the contract. I have great confidence in my associates over there, my fellow directors in the Central. I am not a director in the Southern. I was for a short time, but I am not now.

Q. Is not the contract price for the work practically an exhaustive contract, and does it not exhaust the capital stock, the first-mortgage bonds, and most of the local appropriations made in aid of its construction?

A. I have no doubt about that. I can see very readily how people hers who do not understand the topography of that country would think it was a very high price. From Caliente to the summit we have, I think, 17 tunnels, and a good many are pretty long tunnels. Then we cross a number of ranges of mountains. We have a tunnel nearly 8,000 feet long, the San Fernando tunnel. If we did not work with great economy we could not build the road at all."

These clear and lucid responses made by Mr. Huntington to the interrogatories of the committee show from what source the Secretary has copied his style of writing.

mittee abow from what source the Secretary has copied his style of writing.

Some hundred years or more ago La Fontaine wrote a very pretty fable; and while it may not be applicable to this particular case, I am sure that all Californians will thank me for ealling to their recollections this example of the standard literature of a past generation, as it will serve to remind them how little we have progressed in these later days:

A PABLE.

progressed in these later days:

A PABLE.

Sly Bertrand and Ratto in company sat, (The one was a monkey, the other a cat,) Co-servants and lodgers:
More mischievous codgers
Ne'er messed from a platter since platters were flat.

Was anything wrong in the house or about it,
The neighbors were blameless—no mortal could doubt it,
For Bertrand was thievish and Ratto so nice,
More attentive to cheese than he was to the mice.
One day the two plunderers sat by the fire,
Where chestnuts were roasting, with looks of desire.
To steal them would be a right noble affair.
A double inducement our heroes drew there—
Twould benefit them could they swallow their fill,
And then 'twould occasion to somebody ill.
Said Bertrand to Ratto, "My brother, to-day
Exhibit your powers in a masterly way,
And take me these chestnuts, I pray,
Which were I but otherwise fitted
(As I am ingeniously witted)
For pulling things out of the flame,
Would stand but a pittifl game."

"Tis done," replied Ratto, all prompt to obey;
And thrust out his paw in a delicate way.
First giving the sakes a scratch,
He opened the coveted batch,
Then lightly and quickly implinging,
He drew out, in spite of the singeing,
One after another, the chestnuts at last,
While Bertrand centrived to devour them as fast.
If a misjudging and censorious world, in pointing the moral, should substitute Central Pacific Railroad Company for Sir Bertrand, and Southern Pacific Railroad Company for Sir Bertrand, and Southern Pacific Railroad Company for Sir Bertrand, and Southern Pacific Railroad Company for Ratto, or should even make a more personal application, I feel confident that a letter from Secretary Willcutt would set everything right.

Please accept my thanks, Mr. Editor, for this and a former

Please accept my thanks, Mr. Editor, for this and a former tearing in your valuable journal.

FRANK S. BOND, Vice-President.

ANNUAL REPORTS.

Pennsylvania.

Pennsylvania.

The annual report for the year 1875 comes to hand too late for more than a brief summary this week, and we reserve it for fuller treatment hereafter. The report covers all the lines east of Pittaburgh and Erie, including the 358 miles of the main line from Pittaburgh to Philadelphia, the 547 miles of branches in Pennsylvania, the 288 miles of the Philadelphia & Erie, the 301 miles of the United New Jersey (including the connecting and the Philadelphia & Trenton roads), the 80 miles of the Belvidere Delaware and Flemington and 66 miles of the Delaware & Raritan Canal, in all 1,574 miles of railroad and 66 canal. The change in mileage from 1874 is an increase of 28 miles in the branches in Pennsylvania. The line owned is the

356 miles of main line and 98 miles of branches, all the rest being leased. The company, however, owns a controlling in-terest in most of the Pennsylvania branches. Gen'l freights. \$22,807,600 00 \$24,715,418 15 Dec. \$1,907,758 15 7.7 Emigrant passengers. \$9,900,646 63 \$2,280,076 43 Dec. \$29,802 13 Dec. \$29,902 13 Dec. \$29,102 00 14.5 Miscellaneous 51,73 04 \$20,802 24 Dec. \$29,100 00 14.5 Miscellaneous 51,73 04 \$20,802 24 Dec. \$20,000 00 14.5 Miscellaneous 51,73 048 50,000 00 14.5 Miscellaneous 51,73 048 50,000 00 14.5 Miscellaneous 51,73 048 51,000 00 14.5 Miscellaneous 51,000 Canal. 1,067,660 58 1,320,519 23 Dec. 252,858 65 19 2 Total.....\$34,464,104 38 \$37,386,427 27 Dec.\$2,922,322 80 7.8 nducting transportat'n \$7.498,663 92 \$8,518,842 32 Dec. \$1,120,178 40 18.0 cilve power. 5,913,644 81 5,968,146 37 Dec. 84,501 56 1.4 1,921,200 51 1 943, '06 80 Dec. 21,846 29 1.1 5,173,434 31 Dec. 430,178 74 8.3 509,892 77 Dec. 33,292 03 6.5 763,416 64 Dec. 227,380 88 29.6 Tot.expens's \$21,094,461 31 \$23,0'1,749 21 Dec.\$1,917,287 90 Net earnings.\$13,360,643 07 \$14,374,678 06 Dec.\$1,005,034 99 7.0 Deducting from the expenses of 1874 the sum of \$517,007.55 paid for ground reuts, certain branch rentals and New Jersey transit duties, which were charged to expenses in that year, the results are as follows: 1875. 1874. Inc. or Dec. P. c. Gross earnings. \$34,454,104 38 \$37,386,427 27 Dec. \$2,922,322 89 7.8 Expenses. 21,094,461 31 22,494,741 66 Dec. 1,300,280 35 5.8 Net earnings....\$13,349,643 07 \$14,891,685 61 Dec \$1,522,042 54 10.2 Rentals paid.... 1,672,891 15 2,054,715 25 Dec. 341,884 10 18.6 Interest charged Total...... \$1,946,446 85 \$2,054,715 25 Dec. \$108,268 40 5.3 Net result...\$11,423,196 22 \$12,836,970 36 Dec. \$1,413,774 14 11.0 Net result...\$11,423,196 22 \$12,836,970 36 Dec. \$1,413,774 14 11.0 The 358 miles of the Main Line earned \$18,363,948,90, or \$51,296 per mile, a decrease of \$1,935,368,09, or \$9.5 per cent., from 1874. The cost of operating was \$5.87 per cent. of the gross earnings against \$4.25 per cent. in 1874. The 547 miles of branches earned \$2,125,308.07 (43,893 per mile), a decrease of \$213,732.40 from the earnings of the 519 miles worked in 1974. The working expenses, rentals and interest on equipment of branches were \$2,087,124.98, leaving a net result of \$42.185.09. The earnings of the Philadelphia & Eric were \$3,365,897.24, and the net balance to credit of that company, after deducting expenses and interest on equipment, was \$954,616.27. The actual cost of working the road was \$6.21 per cent. of its receipts.

The net results of the New Jersey leases, including the Philadelphia & Trenton, the Belvidere Delaware and the canal, 381 miles of railroad and \$6 of canal, were as follows: 169,400 22 Total loss... \$647,665 69

The net loss in 1874 was \$31,161. The increase in loss is due mainly to the great diminution of the coal traffic of the Belvidere Delaware Railroad and the canal, which was almost suspended for seven months, and in part to the very low rates obtained on through freight for a great part of the year.

The results of the year may be summed up as follows:

Net earnings... 1216 Co. 2116 Co. 2 8 results of the year may be small arrings . \$13,096,027 37 ne trom investments . 3,147,236 33 ... 197.579 82 Main Line and Branches Erie Mileage of road. 905
Receipts per passenger per mile 2.351
Cost 1.699
Receipts per ton per mile 1.058
Receipts per ton per mile 1.058
Cost 1.690
Net earn. 90.442 The tonnage of the main line and branches was 9,787,716 tons, and increase 7.3 per cent. over 1874; this includes 4,731,476 tons of coal and coke. The United New Jersey lines carried 7,846,239 passengers and 3,467,952 tons of freight against 7,837,317 passengers and 3,467,952 tons in 1874. The coal carried amounted to 1,521,474 tons. The Belvidere Division carried 388,435 passengers and 1,026,660 tons (including 844,-275 tons of coal), a decrease of 30.75 per cent. from 1874. The total tonnage of the Delaware & Raritan Canal was 1,958,004 tons (including 1,295,910 tons of coal), a decrease of 15.21 per cent.

tons (including 1,295,910 tons of coal), a decrease of 15.21 per cent.

There has been charged against the net result of the year the dissount on bonds sold and other items, amounting in all to 41,240,398.99. The board has pursued the policy of holding the 42.100,000 contingent fund and the balance of \$10,077,839.14 to credit of profit and loss as a reserve fund to cover any depreciation to this reserve the cost of construction and equipment has been reduced from time to time, so that the general account shows a charge for the main line of \$38,868,966.41, while the cash expenditure up to Dec. 31, 1875, has been #81,862,775, showing what might be called an additional reserve of \$28,000,000. In addition to this, no allowance has been made for the great increase in value of the real estate of the company.

The proceeds of the \$10,000,000 sterling bonds negotiated in 1874 were received during 1875 and used to pay off the \$4.895-840 second-mortgage bonds maturing March 31, and to adjust the Habilities incurred. To provide means to cover cont of new construction and equipment and to pay off outstanding liabilities, a sale was made to Drexel & Co., of \$5,000,000 new 6 per cent, bonds issued under the consolidated mortgage,

The earnings of the entire lines and of the lines worked by the Pennsylvania Company west of Pittsburgh were:

Gross earnings. \$88,006,865 91
Expeases, excluding rentals and dividends. 36,574,140 96

Net result. \$21,522,724 95
Reference is made in the report in detail to many other matters, including the Navy Yard purchase, the lines west of Pittsburgh, etc., which we are obliged to omit for the present. Illinois Central.

For the year 1875 this company's lines remained the same as in 1874, 705.5 miles in Illinois owned and 402.2 miles in Iowa leased. The general balance sheet at the close of the year stood as follows:

Working stock of supplies. \$556,431 95
Iron and steel rails on hand 327,652 16 \$36,798,316 35 884,084 15 1,169,403 90 346,000 00 4,842,000 00 Cash assets...
Miscellaneous assets.
New Orleans Line 7 per cent. bonds on hand...... | Shares | S Burplus.

Total.....\$44,034,804 36 The surplus has been reduced by \$163,057.23 paid for sterling bonds matured and paid in cash and by \$319,716.98 paid in settlement of Dubuque Elevator suit; it was increased by \$169,946.39 permanent improvement on lowa Division.

The work done during the year was as follows:

Engine mileage.... 5,019,441 5,168,893 Inc. 450,548
Passenger train mile-6.8 9,3

With an increase in train mileage there has been a falling off in passenger mileage but a considerable increase in tonings off in passenger mileage but a considerable increase in tonings the fact that a verage length of passenger trips has diminished, but the average haul on a ton of freight has increased. The earnings for the year were as follows, as stated in the General Superintendent's report:

| General Superi | ntendent | 's r | eport: | | | | | |
|---|-------------|------|-----------------------------|----|-------|-----------|----|------|
| | 1875. | | 1874. | | Inc | or Dec. | | P. c |
| Freight | \$5,490,995 | 39 | \$5,700,572 | 96 | Dec | \$209,577 | 57 | 3. |
| Passengers | 1,668,492 | 69 | 1,679,457 | 54 | Dec. | 10.964 | 85 | 0. |
| Mails | 181,982 | 10 | 168,447 | 97 | Inc | 13 504 | 13 | 8. |
| Express | 127,813 | 25 | 141,634 | 22 | Dec | 18,820 | 97 | 9. |
| Ex ra baggage | | | 4,491 | 03 | Dec.; | 4.49 | 63 | 100. |
| Sleeping cars | 34,328 | 36 | 27,649 | 43 | Inc | 6,678 | 93 | 24. |
| Rent of proper- | | | | | | | | |
| ty and tracks. | 252,595 | 73 | 211,307 | 52 | Inc | 41,288 | 21 | 19. |
| Storage and | | | | | | | | |
| dockage | 12,346 | 13 | 13,672 | 68 | Dec | 1,326 | 85 | 9. |
| Switching, tele- | | | | | | | | |
| graph, miscel- | | | | | | | | |
| laneous | 33,691 | | 621 | 42 | Inc . | 33,070 | | ** |
| Cairo ferry | 39,566 | 99 | **** | | Inc | 39,566 | 39 | 0.0 |
| Total | 87.841.781 | 78 | \$7,947,855 | 36 | Duc. | \$106,073 | BR | 1. |
| Working exp's | | | 4.030,150 | | Dec. | | | 1. |
| | | - | | _ | | | | - |
| Not earn'ge. | | 73 | \$3,917,704 | 59 | Dec. | \$65,369 | 86 | 1. |
| Gross earnings | | | | | | | | _ |
| per mile | \$7,079 | | \$7,175 | | Dec | \$96 | | 1.3 |
| Net earnings | | | | | | | | |
| | | | 3,836 | | Dec. | 88 | | 1. |
| | | | | | | | | |
| penses | 60.87 | | 80.70 | | Inc | 6.17 | | 0. |
| The earnings | of 1975 . | mon. | o divided | 6 | | | | |
| per mile Per cent. of expenses The earnings | 60.87 | | 3,836 50.70 e divided | | Inc | 6.17 | | |

| The earnings of 1875 were divided as follows: Earnings from lines owned Net earnings over Chicago, Burli-gton & Quincy Net earnings over Toledo, Peoris & Warsaw | \$5,448,728 464,474 39,225 | 62 |
|---|----------------------------------|----------------|
| Total in Illinois Dubuque & Sioux City | \$5,952,428 1 194 594 | 78 42 48 |
| Total of all lines | \$7,802,556 | 41 |

1,143,027 45 Net balance. Land office receipts. Surplus of 1874. \$2,670,081 92 223,297 42 196,218 79 Total ... \$3,089,598 13
Interest on bonded debt \$661,098 87
Dividends ... 2,9 9.476 00
2,980,574 57

The Construction Department reports 6,551 tons steel rails, 3,804 tons iron rails, and 370,351 ties used in track repairs; 7 miles of new sidings laid; 4.65 miles of new fence built, and 31.8 miles rebuilt; several new depots and three water tanks put up, and 5,254 feet of pile and trestle bridges rebuilt. There mow 218 miles of track laid with steel. Construction account was charged with \$402,804.54, including new buildings, sidings, etc., and excess of weight of new over old rails laid on Iowa Division.

The Superintendent recommends the building of new ongine houses at Fort Dodge and Le Mars, and an addition to that at

| _ | , | | - |
|------|---|---|---|
| 1000 | The company is now entirely without floating debt for the first time in its history and has \$4,924,298.58 on deposit in the hands of the Treasurer, in London and at other points. The estimated amount required during 1876 for new buildings, construction and equipment is \$3,500,000. During the year 6,595 tone of steel and 3,536 tone of iron rails were used on the main line and branches; 4,372 tone of steel on the New Jersey lines; 4,173 tone of steel and 2,099 tone of iron en the Philadelphia & Erie. Two additional tracks have been laid from Philadelphia to Overbrook and from Pittsburgh to East Liberty, and four miles of third track between Philadelphia and Jersey City. At the Altoons shope 43 new locomotives and 761 freight cars were built, 222 coal cars were bought and an arrangement made for the purchase through a car trust of 2,000 more coal cars. | Tonnage mileage north 124,342,773 108, | 1874. ,125,897 433,366 ,909,268 649,965 conta. |
| 8 | The earnings of the entire lines and of the lines worked by | The locomotive equipment consists of 202 engines; 5 f | reight |

lest traffic of the line was \$2,670,081.92, and the income from land \$223,297.42.

"The business suffered from the pressure of competition by lines adjacent to our own, that have, during these evil times, been obliged to suspend interest payments upon their debts. The directors expect less interference from this source the present year, as several of these lines are recovering from their crippled condition, and, by arrangements which have been skillfully perfected by our General Manager, will, it is hoped, be tributary to our line in the future.

"We have, besides, to r- port an exceptional harvest of corn, more abundant than any for several years. This will, of course, increase our freight traffic.

"In April last, \$2,671,000 constructionbonds, which matured, were paid and cancelled, leaving \$64,000 not presented at the close of the year, which prevents the absolute cancellation of the mortgage.

"Five hundred and twenty thousands pounds sterling of redemption bonds were paid on April 1, and a new loan for £500,000 at 6 per cent. was issued in their stead.

"Several large claims upon the company, of many years standing, have been liquidated, leaving us at the present mement free from any except such as arise from actual current business.

"Steel rails have declined to about half the prices paid three

"Several large claims upon the company, or many years standing, have been liquidated, leaving us at the present moment free from any except such as arise from actual current business.

"Steel rails have declined to about half the prices paid three years since. We have 12,000 tons purchased at the present low rates, and have ordered 500 freight cars to be in readiness on May 1, and shall, if the traffic develops as the managers of the line anticipate, increase this number.

"To meet these outlays, £200,000 sterling 5 per cent. bonds have been sold at a fair premium.

"The benefit of the Southern Line has proved, the past year, about equal to the interest charge which the company has incurred in promoting its construction. But we have not derived the large traffic which would have been obtained if the managers of that line had possessed the means thoroughly to equip and maintain their road. The directors are negotiating with the owners of this property, in hope that measures may be concluded which will put this line in good working order from Cairo to New Orleans, and give the advantage which has hitherto failed to accrue to our interests. Our railway traverses the districts of cheapest production of grain and provisions required by the South. The relations of this Southern outlet to our property remain unchanged, and we shall endeavor to effect an arrangement which will secure, in the future, the profit which naturally belongs to the trade with the South.

"There is an increased traffic upon the Iowa Division, and generally, our prospects for business are better than were presented at the opening of last year.

"The directors refer to the reports in detail of the General Manager, and other officers of the Line, whose duties have been efficiently performed.

"The Main Line is 705.5 miles, with 136.51 miles of second track and sidings. The company owns 202 engines and 4,854 cars; 58°.93 miles of the track have been relaid within sux years, 56,826 tons of steel and iron rails, and 1,397,400 ties have been placed in

Chicago & Alton. By the report for the year 1875, the lines worked by the moans are described as follows:

| company are democrated no rossons. | | |
|--|------------------|---------------|
| Main line. | Second Track. | Sid- ings. |
| Chicago to Joliet (leased) 37,20 | 23.48 | 16.46 |
| Joliet to East St. Louis (owned)243,50 | 30.50 | 53.08 |
| St. Louis, Jacksonville & Chicago (leased).150.60 Dwight to Washington and .branch to La- | 00000 | 21.28 |
| con (owned) 79.80 | ***** | 6.71 |
| Roodhouse to Louisiana (owned) 38.10 Louisiana & Missouri River R. R. | | 3.54 |
| (leased)100.80 | | 8.97 |
| 650 00 | 83.98 | 101.04 |

Total length of first and second main track, computed as single track, is 703 98-100 miles. Total length, including sidings: 805 2-100 miles. Number of stations upon the several lines, 131, of which 111 are in Illinois and 20 in Missouri. The mileage owned is 361.4 miles.

This statement gives 0.9 miles more of main line than the report for 1874, when the leased line from Chicago to Joliet was given as 38, instead of 37.2 miles, the main line from Joliet to East Louis 242, instead of 243.5 miles; the distance from Roodhouse to Louisiana 37.6, instead of 38.1 miles; and the Louisiana & Missouri River road as 101.1, instead of 100.8 miles. The changes, all very small, are probably due to a more accurate determination of distances.

The number of engines and cars upon these lines at the clove of the year was as follows:

| ı | of the year was as follows: | | |
|---|--|--|----|
| | Locomotives, of which 46 are provided with the Westinghouse automatic air brakes, and 8 with dri- | Combination (box and stock) | 61 |
| | Pullman sleeping cars (three | Stock cars | 30 |
| 1 | not in use) | 12 Platform and coal cars | 88 |
| | Pullman dining cars | 5 Dump coal cars | 1 |
| | Passenger coaches | 58 Drovers' cars 2 Tool and wrecking cars | 2 |
| | Baggage and mail cars | 3 Paymaster's car | 1 |
| 9 | Baggage and express cars | 0) | |

Comprising 98 cars for use in passenger trains (90 of which are provided with the Westi ghouse automatic air brake) and 3,080 freight cars of different kinds.

This shows during the year an increase of one locomotive and 124 freight cars of different kinds.

The stock and funded debt representing this property are as follows: CAPITAL STOCK.

| | FUNDED D | EBT. | \$12,363,200 | 13 |
|---|--|--|---|---|
| First mortgage sinking First mortgage 7 per cer Income bonds, 7 per cer Consolidated 6 per cent. | fund bonds | 10 1 01 million | \$28,000 ,383,000 ,087,000 | 1 |
| Consolidated 6 per cent. 1, 1903, £800,000, say | sterling bond | , due July | ,893,200 | 1 |
| Consolitated o per cent. 1, 1903, £800,000, say St. Louis, Jacksonvill bonds, assumed in Roodhouse to Louisi cent., maturing April Second mortgage, matu | e & Chicago purchase of | Railroad road from | | |
| cent., maturing April Second mortgage, matu | 1, 1894 ring July 1, 19 | gage, 7 per | 564,000 188,000 | 1 |
| Total bonds (\$22,58) | | _ | \$8,143,20 | |
| Total stock and bon | | | \$20,506,40 | 0 |
| The figures per mile : The only change i | | | se of \$719.200 is | |
| common stock, and scrip due to the conv | a correspond | ling decrease | e of convertible | |
| former. In bonds th | iere is a dec | rease of \$45 | 0.000 in the first | - 1 |
| mortgage sinking-fur reckoned in the report bonds, giving a total | rt as \$973,300. | in the cons | olidated sterling | 3 |
| account. There was | expended du | ring the yea | r for locomotive or additional cos | 8 [|
| of steel used in track ment of permanent | repairs over | cost of iron | and for improve | - |
| amounts for improve The President, Mr. | шень, швки | IN BUILDING KICK | Fre of \$070' (10'%) | |
| vour company under | ngth of the | ase is 288 6-1 | way operated by 0 miles. | 1 |
| "In each case the to make all necessar | terms of the | e lease requi | re your compan itions to the rail | y |
| way, and to provide i "In pursuance of traffic resulting fro | rolling stock such requir | for operating ements and | the demands of | f |
| traffic resulting fro | m the opera | tion of the | leased lines, you pended from th | e |
| \$4,500,000. | eret mettes | OI RECCES IS | na nonas spor | " |
| "The Joliet & Chi ville & Chicago road | cago Railroa have both 1 | d and the Si been greatly | Louis, Jackson improved by th | e |
| ville & Chicago road expenditures referre worth to your comp | d to, and all | l of the lea acre than a | sed lines are no n amount which | w h |
| "The leased lines | are essential | e annual ren parts of you | t paid. Ir railway systen | a, |
| and your property in for the purpose of c | onsidering th | e general re | sults of traffic | it |
| permanent investme | ent in or cost | to your com | pany of the entir | re |
| The stock and b | onds issued b | y your comp | any represent th | ae |
| provements and roll | ing stock upo | the expendit on lines held | under lease. Th | n- ne |
| of annual rent pai | d, which m | is shown by | y the several sur dized for the ye | ar ar |
| 1875 as follows: Rent paid Joliet & C | hicago Railro | ad Com- | | |
| Capitalized at 7 per ce | nt. represents | \$131, | 805 00 \$1,880,091 | 43 |
| Rent paid St. Louis, J Railroad Company. Capitalized at 7 per e Rent paid Louisiana | acksonville & | Chicago 240 | ,000 00 3,428,571 | 49 |
| Rent paid Louisians | & Missouri Ri | ver Rail- | 801 24 | 10 |
| road Company Capitalized at 7 per c | | 8 | 597,160 | _ |
| Add amount of stock | is and bonds is | sued and | \$5,905,803 | 43 |
| assumed by C. & A. stated | Railroad Co., | as before | 20,506,400 | 00 |
| Total | | | \$26,412,203 | |
| "Although the a | at any time d | uring the la | at five years wor | ald |
| have been, much to fairly represent, | for the purp | oregoing sta | d to, what is co | m- |
| "It is equal to as track, excluding a length of first and | a average cos | t of \$40,684. | 6 per mile of m | ain |
| length of first and division, excluding | second mai | n tracks is to | ken as the basis | of |
| double-track railwe "We think that that for a road like | ays, the avera | ge cost per | mile is \$37,518.46 | o. mit |
| that for a road like with steel rails, w | yours, with | nearly one- | half its track l | aid |
| with steel rails, w demands for transp first-class condition reasonable annual | portation, and | l its entire i | ailway property u seek to obtain | in |
| The work done w | revenue is ne | ot extravaga | nt." | |
| | | | | |
| Train mileage— | 1875. | 1874. | Inc. or Dec. | |
| Passenger | 945,95 | 1.008,926 | Dec., 62,976 | P. c |
| Revenue freight Total of trains ear | 945,950 1,362,02 | 1,008,926 3 1,359,023 | Dec. 62,976 Inc. 3,000 | P. c 6.: 0.: |
| Revenue freight Total of trains earevenue Total mileage of motives | 945,95 1,362,02 raing 2,307,97 loco- | 1,008,926 1,359,023 2,367,949 9 3,562,625 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 | 6.5 0.5 2. |
| Revenue freight Total of trains ear revenue Total mileage of motives Passengers carried. Passenger mileage. | 945,956 | 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 | P. c 6.: 0.: 2. 4.6 |
| Total of trains ear | 945,956 | 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 1 1,421,158 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 | 9. c 6. 0. 2. 4.6 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Passengers carried. Passenger mileage. Tous of freight car | 945,956 1,362,02 raing 2,307,97 loco- 3,599,37 862,26 39,913,85 ried 1,545,80 d the expens | 1,008,926 1,359,023 2,367,949 9 3,562,625 4 904,223 2 1,421,158 es for the year | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo | P. c 6.: 0.: 2. 0. 4.6 8.7 |
| Revenue freight a revenue. Total mileage of motives. Passenger carried. Passenger mileage. Tota of freight car. The earnings an | 945,98 1,362,02 raing 2,307,97 loco 3,539,87 602,26 602,26 ried 1,545,60 d the expens 0808 1 1874. | 0 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 4 1,421,158 es for the years EARNINGS. 1875, 81, 250,688,77 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo inc. or Dec. Dec. \$167,661 65 | P. c 6.3 0.4.6 8.7 ws |
| Revenue freight a revenue. Total mileage of motives. Total mileage of motives. Passenger carried. Passenger mileage. The earnings an From passengers. From passengers. From treight. From express. | 945,955 1,362,02 1,362,02 1,362,02 1,362,02 1,362,03 1,545,80 1,545,80 1,545,80 1,545,80 1,545,80 1,545,80 1,545,80 1,545,80 1,545,80 | 0 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 4 1,421,158 6es for the years, 1875, 11,375,688,77 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo inc. or Dec. Dec. \$167,661 65 | P. c 6.: 0.: 2. 0. 4.6 8.7 ws |
| Revenue freight. Total of trains earevenue. Total mileage of motives | 945,955 Taing 1,362,02 Taing 2,307,97 loco- 3,899,87 862,26 39,913,86 Tied. 1,545,80 d the expens 00088 1 1874. 1,3446,860 91 101,059 03 48,240 64 | 9 1,008,926 3 1,359,023 3 2,967,949. 9 3,562,625 4 904,223 1 1,421,158 10 1875. 81,262,698 77 3,173,531 43 98,890 37 36,192 36 35,470 90 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 Ed. 2,73,849 Ed. 2,178 Ed. 2, | P. c 6.3 0.4 4.6 8.7 W8 P. c 11.7 2 12 26 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Passengers carried. Passenger mileage. Tons of freight car. The earnings an From passengers. From freight From express. From mails Miscel'ous sources. | 945,956 1,362,02 raing 1,362,02 1,362,02 3,539,67 862,26 3,913,57 1,545,80 d the expens 0 moss 1 1,420,350 42 1,040,050 03 4,050 04 48,240 64 | 9 1,008,926 3 1,359,023 3 2,967,949, 9 3,582,625 4 904,223 1 2 1,421,158 1875, | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. 2167,661 65 Dec. 273,349 48 Dec. 2,178 66 Dec. 12,769 74 | P. c 6.: 0.: 2. 0. 4.6 8.7 ws |
| Revenue freight. Total of trains earevenue. Total mileage of motives. Passengers carried. Passenger mileage. Tons of freight car. The earnings an From passengers. From freight. From express. From mails. Miscel'ous sources. Totals. For conducting | 945,956 1,362,92 1,362,92 1,307,97 1 loco 3,599,87 862,26 39,913,85 1814 1,545,860 1101,059 93 109,697 03 45,240 64 \$5,126,228 03 OPERATING | 9 1,008,928 3 1,359,023 3 2,367,949 9 3,582,625 4 994,223 1,421,158 666 for the years 1,875,631 43 98,880 37 36,192 36 35,470 90 84,656,763 83 6 EYFENSEN. | Dec 62,976 Inc 3,000 Dec 59,976 Dec 22,746 Dec 41,959 Inc 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 65 Dec 273,349 48 Dec 2,73 66 Dec 13,504 67 Dec 12,769 74 | P. c 6.3 0.4.6 8.7 ws P. 1.1 7 2 12 26 |
| Revenue freight. Total of trains earevenue. Total mileage of motives. Passengers carried. Passenger mileage. Tons of freight carr The earnings an From passengers. From freight. From mails. From mails. Totals. Totals. For conducting transportation. For motive power. | 945,955 1,362,02 raing 1,362,02 raing 2,307,97 loco 3,539,913,85 ried1,545,80 d the expens 1374. 11,420,350 42 1,446,860 91 101,059 08 109,997 03 45,240 04 \$5,126,228 03 OPERATIN. 1874. \$602,693 73 | 9 1,008,928 3 1,359,023 3 2,367,949 9 3,582,625 4 994,223 1,421,158 665 for the years 1875, 11,252,688 77 3,179,531 43 98,880 37 36,192 36 35,470 90 84,656,763 83 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 Ed. 2,73,849 Ed. 2,178 Ed. 2, | P. c 6.3 0.4.6 8.7 ws P. 1.1 7 2 12 26 |
| Revenue freight. Total of trains earevenue. Total mileage of motives Passenger carried. Passenger mileage. Tons of freight car The earnings an From passengers. from freight. From express. From mails Miscel'ous sources. Totals For motive power. For motive power. For maintenance | 945,956 1,362,02 raing 1,362,02 raing 2,307,97 loco 3,539,97 862,26 39,913,86 ried1,545,86 d the expens 1374. \$1,420,350 42 3,446,860 91 101,059 08 109,697 03 45,240 64 \$5,126,228 03 OPERATIN. 1874. \$602,693 73 T99,720 36 | 9 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 2 1,421,158 96 for the years 1875, 1,252,688 77 3,173,531 43 98,860 37 36,192 36 35,470 90 34,656,763 83 9 EYPENSES 1875,461 45 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 65 Dec 273,849 48 Dec 273,849 48 Dec. 12,769 74 Dec. \$469,494 20 Dec. \$47,212 28 Dec. 70,298 00 | P. c 6.3 0.3 4.6 8.7 W8 P. c 111. 7 2 12 26 |
| Revenue freight. Total of trains earevenue. Total mileage of motives Passenger scarried. Passenger mileage. Tons of freight car The earnings an From passengers. From freight. From express. From mails. Miscel'ous sources. Totals For conducting transportation. For motive power. For maintenance of way For maintenance of cars. For gener.l ex- | 945,956 1,362,02 raing 1,362,02 raing 2,307,97 loco 3,539,97 862,26 39,913,86 ried1,545,86 d the expens 1374. \$1,420,350 42 3,446,860 91 101,059 08 109,697 03 45,240 64 \$5,126,228 03 OPERATIN. 1874. \$602,693 73 T99,720 36 | 9 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 2 1,421,158 96,869 77 3,178,531 43 98,860 37 36,192 36 35,470 90 34,656,763 83 9 EYPENSES 1875,461 45 729,422 36 | Dec 62,976 Inc 3,000 Dec 59,976 Dec 22,746 Dec 41,959 Inc 124,644 ear were as follo linc, or Dec. Dec 213,549 Dec 13,504 67 Dec 13,769 74 Dec \$47,212 Dec \$47,212 Dec 70,298 00 Dec 64,530 35 | P. c 6.3 0.4.6 8.7 ws P. d 111. 7 2 122 266 9 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Total mileage of motives. Passenger carried. Passenger mileage. Tons of freight carr The earnings an From passengers. From passengers. From passengers. From mails. Miscel'ous sources. Totals. For conducting transportation. For motive power. For maintenance of way. For maintenance of cars. For gener-1 expenses. | 945,956 1,362,02 raing 1,362,02 raing 2,307,97 10co 3,539,913,85 ried1,945,69 dd the expens 1,674,890,91 101,059 03 109,097 03 45,240 04 35,126,228 03 0PERATIN. 1874. \$602,693 73 799,720 36 781,140 35 243,386 96 162,400 66 | 9 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 2 1,421,158 96 for the years 1,875,231,431 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 98,860 37 31,173,531 43 1875,461 45 716,610 00 249,916 45 152,695 68 | Dec 62,976 Inc 3,000 Dec 59,976 Dec 22,746 Dec 41,959 Inc 124,644 ear were as follo Inc. or Dec. Dec 213,849 Dec 2,178 Dec 12,780 Dec 12,760 Thec 12,760 Dec 12,760 Dec 447,212 Dec \$447,212 Dec \$447,212 Dec 447,212 Dec 64,530 Dec 64,530 Dec 64,530 Dec 64,530 Dec 9,714 | P. c 6.3 0.4.6 8.7 ws P. (111. 7 212. 126. 9 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Total mileage of motives. Passenger mileage. Tons of freight car The earnings an From passengers. From passengers. From passengers. From mails. Miscel'ous sources. Totals. For conducting transportation. For motive power. For maintenance of way. For maintenance of cars. For gener.1 expenses. Total. | 945,955 1,362,02 raing 1,362,02 raing 2,307,37 10cc 3,539,37 862,26 39,913,86 ried. 1,545,60 dt the expens 018088 1 1374. \$1,420,350 42 : 3,446,860 91 101,059 93 109,697 03 48,240 64 \$5,126,228 03 0PERATIN: 1874. \$602,693 73 799,720 36 781,140 35 243,386 96 162,409 66 \$2,789,351 06 | 9 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 2 1,421,158 96,869 77 3,178,531 43 98,880 37 36,192 36 35,470 90 34,656,763 83 9 EYFENSES. 1875,461 45 729,422 36 716,610 00 249,916 45 152,695 08 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 65 Dec. 135,504 67 Dec. 12,769 74 Dec.\$469,494 20 Dec. \$47,212 28 Dec. 70,298 00 Dec. 64,530 35 Inc. 6,529 49 Dec. 9,714 58 Dec. \$185,225 72 | P. c 6.3 0.4.6 8.7 ws P. (111. 7 212. 126. 9 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Total mileage of motives. Passenger mileage. Tons of freight car The earnings and From passengers. From freight. From express. From mails. Miscel'ous sources. Totals For motive power. For motive power. For maintenance of cars. For gener.l expenses. Total. Total. | 945,955 1,362,02 raing 1,362,02 raing 2,307,97 10co- 3,539,37 862,26 39,913,86 ried1,545,86 di the expens 0ROSS 1 1374. \$1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 42 1,420,350 1,420,350 1,420,350 1,420,400 1,420, | 9 1,008,926 3 1,359,023 3 2,367,949 9 3,562,625 4 904,223 2 1,421,158 96,869 77 3,178,531 43 98,880 37 36,192 36 35,470 90 34,656,763 83 9 EYFENSES. 1875,461 45 729,422 36 716,610 00 249,916 45 152,695 08 | Dec. 62,976 Inc. 3,000 Dec. 59,976 Dec. 22,746 Dec. 41,959 Inc. 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 65 Dec. 135,504 67 Dec. 12,769 74 Dec.\$469,494 20 Dec. \$47,212 28 Dec. 70,298 00 Dec. 64,530 35 Inc. 6,529 49 Dec. 9,714 58 Dec. \$185,225 72 | P. c 6.3 0.4.6 8.7 ws P. (111. 7 212. 126. 9 |
| Revenue freight. Total of trains ear revenue. Total mileage of motives. Passengers carried. Passenger mileage. Tons of freight car The earnings an From passengers. From freight. From express. From mails. Miscel'ous sources. Totals. For conducting transportation. For motive power. For maintenance of way For maintenance of cars. For general expenses. Total. Sum Farnings from all | 945,956 1,362,92 raing 1,362,92 1 loco 3,599,87 862,26 39,913,85 ried. 1,545,86 d the expens 1874. \$1,420,350 42 3,446,860 91 101,059 03 109,697 03 48,240 64 \$5,126,228 03 OPERATIN. 1874. \$602,693 73 799,720 36 781,140 35 243,386 96 162,409 66 \$2,789,351 06 | 9 1,008,928 3 1,359,023 3 2,367,949 9 3,582,625 9 9,4,223 14 994,223 14 1,252,688 77 3,173,531 43 98,880 37 36,192 36 35,470 90 84,656,763 83 6 EYFENSEN. 1875. \$755,461 45 729,422 36 716,610 00 249,916 45 152,695 08 \$2,604,125 34 KINGG AND EX | Dec 62,976 Inc 3,000 Dec 59,976 Dec 22,746 Dec 41,959 Inc 124,644 ear were as follo Inc. or Dec. Dec. \$167,661 65 Dec 273,349 48 Dec 13,504 67 Dec 13,504 67 Dec 13,769 74 Dec \$47,212 28 Dec 70,298 00 Dec 64,530 35 Inc 6,529 49 Dec 9,714 58 Dec. \$185,225 72 | P. c. 6.3 9.4.6 8.7 8.7 9.11. 7 2122 26 9 |
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| DISBURGEMENTS. | di sa sibili |
|---|---|
| Interest on funded debt | the power difference penganja power, mal |
| Paid dividends, Nos. 24 and 25 | 4,650,071 97 |
| Balance Dec. 31, 1875 | \$126,585 55 |
| In comparing the disbursements with those of 1 an increase of \$70,347.60 in interest on funded debt of \$14,287.60 in Johet & Chicago rent, a decrease of in Louisiana & Missouri River rent, and a decrease in payment to sinking funds. The report says: "Large sums have been a propriated from incoin years past, when the company had no other av | , a decrease r \$81,672.59 e of \$44,000 ome accoun- ailable fund |
| for procuring additional property or for improve subsequently, when bonds and shares of stock we provide funds for such purposes, that account was bursed by the entry of corresponding amounts. Et tries been made a much larger balance would a credit of that account. | s not reim Lad such en |
| "The general assets of the company at the close in addition to its railway and equipment, consisting fuel, etc., on hand for future use, securities of the | of supplies |

"The general assets of the company at the close of the year, in addition to its railway and equipment, consisting of supplies, fuel, etc., on hand for future use, securities of the Mississippi River Bridge Company, bills and accounts receivable, stocks, cash and cash assets considered good, in excess of bills and accounts payable, amount to \$1,123,531.03, which may be considered the accumulated surplus, in which is included the balance to the credit of the income account."

Of the freight moved last year, 88.35 per cent. was local and 11.65 per cent. through. There was an increase of 12.71 per cent. in the local freight and a decrease of 14.04 per cent. in the through. Four-fifths of the passenger receipts were from local passengers, and these local passenger receipts fell off nearly θ per cent.

The carnings per train mile were:

| The earnings per train mile were: | | | |
|--|----------|------|---------|
| State State of the State of the Parket | 1875. | | 1874. |
| Passenger train | | | \$1 61% |
| Freight train | . 2 33 | | 2 535 |
| The locomotive expenses were 19.25 | cents in | 1875 | agains |

The locomotive expenses were 19.25 cents in 1875 against 20.80 cents. in 1874, the decrease being nearly 8 per cent. There were laid during the year 8,811 tons of steel rails (99.98 miles of track), 238 tons of iron rails, and 239,297 crossites. The road has now 276.65 miles of steel track. Concerning the lease of the Ohicago & Illinois River Railroad and the decrease in earnings the report says:
"On the 27th of January, 1873, a circular was forwarded to each stockholder in relation to the proposed lease of the Chicago & Illinois River Railroad, which had been built from Joliet to the Mazon River, traversing the Wilmington coal fields, upon a line nearly parallel with yours, at a distance of about four miles, threatening formidable competition with your railway.

8,529,010 bushels, the amount transported the preceding year being 11,207,377 bushels. In 1874 the corn crop was in many sections almost an entire failure, and furnished for transportation in 1875, 4,929,991 bushels, or shout 45 per cent. of the average of preceding years.

"Upon the corn crop of the preceding year depends not only the amount of corn to be transported, but also the number of cattle and hogs.

"As it has been before stated, the passenger traffic in 1875 was 95 11-100 per cent. local, and was largely reduced in amount in consequence of short crops.

"The reduction in passenger receipts and the loss of receipts from the transportation of corn, cattle and hogs far exceeds the entire reduction of receipts for the year, and the loss on the transportation of corn, cattle and hogs far exceeds the entire loss for the year. If the comparison is made between the amount of corn transported in 1873 (the crop of 1872 being no greater than an average) the loss on the transportation of corn alone is found to be \$520,115, which sum exceeds the entire reduction of receipts in 1875, compared with 1874 by \$50,651.

"The coal traffic in 1875 shows an increase of 163,907 tons, or nearly 29 per cent. over that of the preceding year.

"It is gratifying to observe that with an increased transge of freight transported, and more than an average amount of repairs and renewals charged in that account during the year, the operating expenses are less than in any year since 1868. The accounts for the last year show much that is encouraging in relation to future traffic.

"Perhaps the best index we have of the progress of improvements in towns and upon farms where people rely upon your railway for transported in 1875 was 84,443,440 feet, which exceeds that in 1874 by 12,016,440 feet, and that in 1875 by 3,846,223 feet. In many other articles transported there was an increase compared with the preceding year.

"The crops in 1875 were larger than for several years past. Your road and equipment has been in all respects maintained

Transportation in Congress.

Transportation in Congress.

In the Senate on the 6th:
Mr. Dorsey, of Arkansas, introduced a bill to amend the Pacific Railroad act of July 1, 1862. The bill asserts in a preamble that the Contral Pacific Railroad Company has improperly increased its capital stock, its interest-bearing securities, and the liabilities for or on account of branch roads, steamboat lines, and other properties without authority of Congress, and without a corresponding increase in the value of its real and personal property, and that such action is designed to prevent or postpone for a long time any action on the part of the government in fixing tarnff rates, as the eighteenth section of the law of July 1, 1862, authorized, whenever its net carnings should exceed ten per cent. upon the actual cost of the road between Ogden and Sacramonto. The bill, therefore, proposes to restrain the issue or sale of any more obligations of the company, secured by the mortgage upon the main line, or the land granted by the United States to aid in its construction. The bill also requires a detailed statement of all the company's receipts and expenditures up to Dec. 31, 1875, to be filed with the Secretary of the Interior, and provides that the net receipts shall be applied, first, to the payment of the interest on the first-mortgage bonds on the main line, and the creation of a sinking fund; second, to the payment of interest on the bonds alleged to have been issued, and thus secured without authority, and third, to the purchase and retirement of all the last-described class of bonds. Finally, it is made the duty of a commission, consisting of the Attorney General, the Secretary of the Interior and three citizens to be named by the President of the United States, to see that the foregoing provisions are carried into practical effect. Referred to the Committee on Claims.

Mr. West, of Lomisiana, gave notice that on Wednesday the 8th, he would call up and make some remarks on the communication of the Secretary of the Tresury in regard to the proposition "On the 37th of January, 1973, a circular was forwarded to though a fillions liver latinose, which had been built from Joilet to the Mazon River, traversing the Willington confidence of the process of



Published Every Saturday.

S. WRIGHT DUNNING AND M. N. FORNEY.

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Editorial Announcements.

nsses.—All persons connected with this paper are forbits ask for passes under any circumstances, and we we thankful to have any act of the kind reported to this affice.

ddresses.—Business letters should be addressed and drafts made payable to THE BAILBOAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR BAILBOAD GAZETTE.

divertisements. We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVENTISING COLUMNS. We give in our sdilorial columns our own opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of adver-

ibutions.—Subscribers and others will materially assus in making our news accurate and complete if they will us early information of events which take place under observation, such as changes in ratiroad officers, organims and changes of companies, the letting, progress and pletion of contracts for new works or important improveds of old ones, experiments in the construction of roads machinery and in their management, particulars as to business of rathroads, and suggestions as to its improved. Discussions of subjects pertaining to ALL DEPARTMENTS altroad business by men practically acquainted with them especially desired. Officers will oblige us by forwarding y copies of notices of meetings, elections, appointments, especially annual reports, some notice of all of which will ublished. and machinery am the business of rail ment. Discussions of railroad business are especially desiress

A BUREAU OF EXPERIMENTAL RESEARCH.

A railroad man who has not felt the need of "more on various dark subjects relating to his occupation must have studied its science and art to very little purpose. Every engineer and master mechanic who does any thinking beyond, or rather below, his daily routine, is brought face to face with problems which, with the information in his possession, he finds insoluble. If he is a student, he soon learns that an extremely, or infinitessimally, small portion of the knowledge which he is in search of is contained in books, and that the information he ants must, like gold, be dug for, and then be washed and sifted and separated by various processes from the value-less material in which the precious substance is found imbedded. When this experience first comes to a person, his impulse is usually, if he be of an inquiring turn of mind, to rush into the field of experimental research, and go mining after truth on his own account. Those who are entirely inexperienced in such work are usually very much astonished to find the very great difficulties in the way of making such investigations, or rather of eliminating the exact truth in that way. If the experiments which have been made to determine the resistance of railroad trains were all recorded, it would afford one of the most dreary chapters of unsuccessful search after knowledge which could be written. Usually the problem of train resistances seems a very simple one. All that appears necessary is to attach some kind of a spring to the drawing attachment of a train or car which will indicate the degree of tension required to move it. It is very soon found, however, that the indications of such an intrument are so extremely variable and subject to such sudden fluctuations that it is impossible by simple observation to make a correct record of them. Similar difficulties are encountered in making other experiments, such as those made with the steam-engine indicator, thos on the strength of materials, and in fact almost all investigations which a railroad man is called upon to m Experiments which will be really valuable require in fact special training and fitness for that kind of work, and a novice is very apt to collect erroneous data, which will mislead instead of enlightening him and others.

jects as those we have already referred to, and to determine the power required to draw various kinds of cars under different conditions, or the performance of engines, the properties of lubricants or the effect of springs on the track, and in the resistance of trains, and a dozen other subjects which could be named, there can be no doubt whatever in the mind of any person who has examined into these topics with any care. While it may be that railroad managers may not have fully realized how much they would gain by such researches, yet if their attention is specially directed to it they could, we think, be easily led to see the profit of such work. The great difficulty, however, is to have such work done by competent persons and in such a manner as to be of real value. This was the trouble with the mechanical laboratory which at one time it was proposed to establish in connection with the Master Mechanics' Association, and which led those who at first advocated it to abandon the scheme. The enormous advantage which would result from periodical competitive tests of locomotive engines have been pointed out a number of times in these pages. Supposing now that it was proposed to make such a test, the natural question would arise, who would conduct it? It would involve much time and labor, so that it would be almost impossible, and certainly unreasonable, to expect to find competent persons who would undertake the work without compensation. In short, to have it done as it should be done, it would be necessary to employ one or more suitable persons to do the work and pay them for their services. Now, supposing it be recognized, and we think it must be, that such work to be well done must be under the charge of persons trained to do it, and who can not and should not be expected to work gratuitously, then it becomes necessary to provide the necessary money to meet such expenses. As the parties who would be benefited by such work are the railroad companies themselves, they obviously should bear whatever expense would be incurred. The cost of such work, if distributed among a considerable number of roads, would be so extremely small that there would, we think, be but little difficulty in getting the money to meet the necessary expenses, if it were once clearly shown that the work would be done satisfactorily. But who is to make the application to railroad companies for contributions for this purpose? An individual interested in any particular line of re-

arch would, if possessed of the reserve which a competent person probably would have, be very unlikely to make personal application of this kind; and if he should, a railroad officer would in all probability and very properly ask
"Who are you, and what are your qualifications for doing what you ask us to pay for, and what assurance can you give that the money will be expended wisely, and who will audit your accounts?" These questions would quite naturally occur to all managers of railroads applied to, and would be so difficult for any one person to answer satisfactorily that it would, we think, make it quite impossible to secure any general co-operation among railroad men in sharing the cost of such investigations. Before railroad managers would feel sufficient confidence to contribute money for such a purpose, it would be necessary to provide some re-sponsible head as to whose capacity and integrity there Such responsibility could could be no question. cured, we believe, by the appointment of a committee by, say, the Master Mechanics' Association, or the Society of Civil Engineers, if the latter Association could be induced to forget its "policy" and "by-laws" long enough to un-dertake any such useful work. There is this difficulty, however, that the members of a committee of this kind would in all probability be quite unable to give the requisite time and work required to make such investigations as we have indicated. A competitive trial of locomotives would require that weeks and possibly months should be devoted to it, and other investigations to be thorough and exhaustive would require an equal or greater amount of time. It would therefore be impossible for the members of a committee who were actively engaged in any other occupation to devote the necessary time to such experiments and investigations. They might, however, employ one or more competent pe to do such work under their own supervision and direction. If a committee of this kind, made up of persons whose ability, reputation and integrity would command the confidence of railroad managers, was appointed to conduct experimental researches in matters relating to the practical operation of railroads, it could in the first place determine what kind of investigations and experiments are most needed, and the direction in which such work would be most profitable. This alone is very important, because there is very apt to be a great ate of time, money and labor in such work if these are not employed in the right direction. Such a committee could also determine the conditions and establish rules for making such investigations, and then select and employ the most competent person whose services could be pro-Of the enormous advantages which would accrue to railroad companies if a series of exhaustive experiments were made by competent persons to elucidate such sub.

They would direct the expenditure of money, audit his to this subject, or to publish discussions relating thereto.

accounts and assume the responsibility and make reports of all that is done. By this means different per who are exper's could be selected for making experimental investigation of subjects concerning which information is needed by railroad companies, and which possibly have been subjects of special research by those selected to elucidate them still further. Such a plan would secure the ablest men in the different departs of railroad engineering, who, when they began the work would have more knowledge of the subjects to be investigated than any one else, and would therefore work at an immense advantage over those who have no such preliminary information.

A committee of this kind would, we believe, if properly constituted, command the confidence of railroad managers, so that they would not have the fear that money contributed ostensibly for the purpose of scientific and practical research would be foolishly or corruptly wasted, but would be expended for the purpose for which it was contributed. With 75,000 miles of railroad, an annual contribution of say a few cents each year for each mile of road would yield a fund which would probably be as great as could be employed to advantage by the committee on its first organization. Of the profit of such an outlay there cannot, we believe, be any doubt whatever; and we also think that a large proportion of railroad managers could be made to see the advantages thereof. In Europe, especially in Germany, the investigations which are being made ought to be a cause of humiliation to American engineers, if the work done there is compared with that done here. Any one unfamiliar with what has been done there can learn something about it by attending the monthly meeting of the Master Car-Builders' Association next week. of which a notice will be found in another column, where Mr. Charles Bender will give some account of some researches which have been made there on the life of car axles. There researches of that kind are under the direction of government commissioners, which is of course impossible here, so that we are dependent for such work either on some one company or upon some co-operative effort such as we have proposed.

It is quite true that a number of railroad companies have made quite extensive investigations for their own ad-This has been notably the case on the Pennsylvantage. vania Railroad. The results, although not kept secret, are not published, and instead of being of advantage to all, they go into the archives of the company, and will there probably pass into oblivion.

The scheme we have proposed has been suggested by a recent visit from Mr. P. H. Dudley and also by sever-1 other interviews with different persons interested in scientific research into the secrets of railroad economy. Dudley was formerly division engineer on the Allegheny Valley Railroad, but for some months past he has been engaged in making experiments with a registering dynamometer on the resistance of trains. He has had a dynamometer constructed at his own expense and has made all the experiments without compensation. The instrument which he has employed makes a continuous record on a roll of profile paper. These records already indicate some very valuable information, and show some things which are quite unexpected, and of which we hope to publish a full account at some future time; but to make the investigations will require much more time and labor. Now it is evident that unless a person is wealthy it is impossible to continue such experiments, and, to use a common phrase, "work for nothing and board himself." The result is that Mr. Dudley's experiments must probably be abandoned unless some railroad companies will assist in bearing the expense of making them. We have also a communication from a well-known mechanical engineer who experimented with an exhaust valve and the use counter pressure in the cylinders to arrest the motion of a locomotive and thus act as a brake. He also was unable to complete his experiments for the want of suitable facilities for continuing them. We could enumerate many other similar cases, in which knowledge, as it were, was suffocated before it had strength enough to maintain itaelf.

It is, of course, true that there are numberless vision ary schemers who are always importunate to have their schemes tried. To do so would, in most cases, be a waste of time and labor, and probably of money. Such a committee or board of experiment would form an authority which would be competent to determine whether a subject was worthy of investigation, and if application was made to it, it would of course be right and proper that its members should demand a statement of the reasons for making an investigation. Often it will be found that the subject has already been investigated and the fallacy involved therein expose The committee would thus serve as a sort of sieve to catch humbugs which would venture into it, very much to the relief of many railroad officers and editors of technical

We would be glad to receive communications relating

THE BASIS OF EAST-BOUND RATES.

The managers' meeting on the 1st inst., which was attended by representatives of all the trunk lines, resulted in an agreement concerning the basis of rates which seems likely to secure harmony among the railroad companies and probably, on the whole, greater satisfaction among shippers from different competing points in the Northwest. The meeting was not for the purpose of making rates, but to decide upon the differences in rates from and to different points. This was settled in the simplest possible manner. On east-bound traffic the basis rate is to be that from Chicago to New York; and the charges from all other competing points in the Northwest to the four all other competing points in the Northwest to the four chief seaports are to be at the same rate per mile, or at least not at a less rate. Virtually, this is an agreement that all through traffic from the West to the seaboard may be charged the same rate per ton per mile. The Chicago-New York rate being known, the lowest permissible rate from any other competing point in the Northwest to Boston, New York, Philadelphia or Beltimore may be found by ascertaining the length of the shortest all-rail line by which the ship-ment can be made. Boston being 1,007 miles from Chicago and New York 913, the Chicago-Beston rate will be 1,007-913 of the Chicago-New York, or 1.103 times the lat-So by multiplying the New York rate by 0.9 we find the Philadelphia rate; by 0.876, the Baltimor

The recent tariffs had been made nearly, but not exact ly, on this basis; at least, so far as rates from Chicago to Philadelphia and Baltimore are concerned; but previous to December last the rates to these ports and since that time the Boston rate differed from the New York rate by an arbitrary amount. Whatever the New York rate might be, the Boston rate was five cents higher per hundred pounds on fourth-class freight, and the Phila-delphia and Baltimore rate five cents lower. Now not only are differences dissimilar, but they are varia For instance, if the New York rate should be 80 cents, the Boston rate would be 881 cents; but should the New York rate be only 30 cents, the Boston rate would be 33.1 cents, the difference being 81 cents in the one case and 3.1 in the other. So the Baltimore rate, with the above New York rates, would be 70 cents and 264 cents, respectively; whereas by the old custom they would have been 75 and 25. The amount of the difference thus bes exactly proportional to the amount of the rate.

With the present grain rate of 40 cents per hundred from Chicago to New York, the lowest permissible rates become: Boston, 44.12 cents; New York, 40 cents; Philadelphia, 36 cents; Baltimore, 35 cents. At all the ports except New York the railroads delivering the grain have been accustomed to give relates, sometimes as much a five cents per hundred, on all grain exported. This rebate is to be modified, and in most cases decreased; but a most important feature of the agreement with regard to export grain is that the through rate by rail and ocean steamer from Chicago to Liverpool shall be the same by way of all the ports. This puts Boston, New York, Philania and Baltimore on an equality, so far as grain exports by steam are concerned.

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This basis extends to all competing points in the Northwest, and gives a rule for determining the difference between the Chicago rate and that to the interior compe-ting points farther South, concerning which Chicago shippers have been much exercised of late. Generally, we may say, points near the line between Illinois and Indiana will have rates as low as the Chicago rate, and for points in Southern Illinois the Baltimore rate will be

materially lower tl an the New York rate.

The Illinois towns from which the distance to New York is as short as from Chicago (the shortest line from Chicago being 913 miles) are: Watseka (907 miles), Danville, (910), Paris (916), Marshall (915). Far to the south Lawren ville, at the junction of the Paris & Danville with the Ohio & Mississippi, is ten miles nearer than Chicago to Baltimore. Generally, we may say, the competing points near the east border of Illinois may have on this basis rates as low as those from Chicago. From the chief centers of Western traffic the distance (and the lowes permissible rate) is equivalent to the Chicago distance (and rate) multiplied by the following: Milwaukee, 1; Indianapolis, 0.9; St. Louis, 1.15; Peoria, 1.103. The Milwau-kee rate is determined by the Detroit & Milwaukee route, 80 miles of which is water, but which is open all winter usually. The Indianapolis grain rate accordingly, with the present 40 cent rate from Chicago, should be 36 cents, the Peoria rate 44 cents, and the St. Louis rate 46 cents, plus whatever arbitrary rate may be paid the Bridge Com-

The rates recently have been made very nearly on this basis; but it is the intention to have it adhered to strictly as a limit. The rates per ton per mile may be higher but may not be lower than the Chicago rate. Chicago affords a larger traffic than any other place, and the cost of carrying may reasonably be supposed to be less than for places affording a less traffic. They should not complain if they get as low a rate per ton per mile as that from the greatest

centre of traffic, where cheap freights by water reduce the rail rate to the minin

The union of all the trunk lines in this agreement and their apparently cordial assent to this basis render more than usually improbable any competitive contest during the present year. Rates are low, and a cut would leave no margin for profit. A confirmation of this conservative tendency is the circular recently issued in New York by all the trunk lines by which special contracts are forbid-den. No reduction of the regular rates is to be permitted in any manner, direct or indirect. Certainly with westrates as low as they now are, no shipper should complain, and probably none will except those who wish to secure an advantage over their competitors in business by help of special rates from the railroads.

The Chicago & Alton Report.

The Chicago & Alton Report.

The Chicago & Alton Railroad has had a series of adverse circumstances to contend with of late years. The position of its main line with a great city at each terminus enables it to command a large traffic at almost all times, and probably serves to give it a more than usually even division of traffic in the two directions; and it has special advantages as a coalcarrier, the chief supply of bituminous to Chicago coming from its lines, besides that of the country en its lines. But where seven or eight years ago it had a broad territory for which it was almost the sole carrier, now there are half a dozen cross lines competing for the traffic. When lake rates were high these had a formidable effect in diverting traffic, and of late years, when lake rates were low and the competition less formidable, the crops on this line have been exceptionally poor. Last season, however, there were excellent crops, and the road is likely to have a heavy traffic again, though rates will probably continue to be low. The earnings of the road last year were the lowest since 1868, though it worked 651 miles in 1875 against 431 in 1869. The gross earnings per mile in that time have fallen from \$10,862 to \$7,164, or nearly 35 per cent. This, however, gives an exaggerated impression of the decrease; for most of the new mileage is of roads that were never expected to equal the old road in earnings, and would have been entirely successful with half those earnings. The earnings were largest moss of the new inteage is of roads that were never expected to equal the old road in earnings, and would have been entirely successful with half those earnings. The earnings were largest in 1873, when the mileage was the same as last year. Then they were at the rate of \$8,458 per mile; and the decrease since has been at the rate of 15 per cent. The decrease in net earnings, however, has been nothing like this. These were \$3,450 in 1873 and \$3,158 in 1875, the falling off being only 84

The surplus net earnings, after paying interest and rentals, amounted to 8½ per cent. on the capital stock in 1875, against 10½ in 1874. The dividend, which was 10 per cent. for nine years previously, was reduced to 8 per cent. last year, accord-

mgy.

This road gets a share of the Kansas business, which is sometimes valuable, and a larger one of such of the business of the growing Southwest as goes as far north as Chicago. But the traffic from whose future development it has most to hope is the bituminous coal in the vicinity of Wilmington and Streator. The consumption of this for domestic purposes will grow only with the population, probably, but an immense consumption in manufactures may reasonably be expected, and this may grow very rapidly so soon as there is a return to business activity in the country.

Record of New Railroad Construction.

This number of the Railroad Gazette has information of the

aying of track on new railroads as follows:

Delaware & Bound Brook.—Extended from Hopewell, N. J.,
outhwest to the Delaware River at Yardleyville, 11 miles, com-

Laurens.—Extended from Martin's S. C., to Clinton, 3 miles.

Hot Springs.—Extended ¼ mile to Hot Springs. Ark., completing the road, which is 21¼ miles long and of 3-feet gauge. St. Louis, Keokuk & Northwestern .- Track is laid for 7 mile outheast from Hannibal, Mo., on the extension to Louisiana.

southeast from Hannibal, Mo., on the extension to Louisiana.

Wyandotte, Kansas City & Northwestern.—Extended east 6
miles to Buckner Hill, Mo. It is of 3-feet gauge.

This is a total of 27% miles of new railroad, making 252
miles completed in the United States in 1876.

THE PENNSYLVANIA RAILBOAD REPORT, only a brief s which we are able to publish this week, chronicles the lowest average receipt and expense for carrying freight, we venture to say, in the whole history of railroads. On the Pennsylvania Railroad proper—the line from Philadelphia to Pittsburgh with its branches—the receipt per ton per mile in 1875 was 1.058 cents and the average expense 0.616 cent. On the Philadelphia & Erie—a line with steep grades—the average receipt was 0.865 cent and the average expense 0.571 cent. The Pennsylvania proper is one of the largest carriers in the world, and the extremely low rate to which it has reduced the cost of transportation is worthy of note. On the other trunk lines for the which we are able to publish this week, chronicles the lowest portation is worthy of note. On the other trunk lines for the year ending with September last the expense was much greater. Putting the three whose figures are known (the Baltimore & Ohio does not report) side by side we have:

Per ton per mile.

Receipt. Expense. Profit.

1.068 cts. 0.516 ct. 0.442 ct.

Erie. 1.009 0.949 0.240

On the Eric, therefore, the expense seems to have been 54 per cent. more, and on the New York Central 23 per cent. more than on the Pennsylvania. If the Eric could have been worked as cheaply (it certainly cannot be until it is greatly improved), its net earnings last year would have been greater by more

The effect of the competitive war of last year is shown in the average receipt, 16 per cent. less on freight and 3½ per cent. less on passengers per mile than the previous year.

THE NEW YORK ELEVATED RAILBOAD COMPANY has had its rout: on the east side of the city, through the Bowery and Third avenue, approved by the Commissioners appointed to hear the objections of property-owners on the line. They disapprove of the proposed line on Eighth avenue alongside Central Park, and the proposed connection between Eighth and Ninth avenues on Ninety-second street; but the way is clear for an extension from the present terminus at Sixtieth street up Ninth avenue. The decision of the Commissioners is to be submitted to the Supreme Court, and if it is confirmed there would appear to be no legal obstacles to the construction of an east-side road to the Harlem River, and the company announces that it will be ready to begin work at once and complete a line from South Ferry to the Grand Central Depot with a branch to the City Hall by next January. The road now in operation has a growing traffic, the number of passengers carried monthly having been:

This year.

Last year.

This year 144,105 165,286 183,446

Thus there was an average of 465 passengers daily in De-cember, 533 in January and 632 in February of last winter, with no increase of road; and there is every prospect that it will soon have more work than can be done on a single-track road.

THE MARCH MEETING OF THE MASTER CAR-BUILDERS' ASSOCIATION will be held at the rooms No. 113 Liberty street, New York, Thursday evening, March 16. Mr. Charles Bender, C. E., will give an account of the results of experiments on the life of railroad car axles and springs, made in Germany by Mr. Woehler, Commissioner of the German State Railroads. A diswill follow the remarks of Mr. Bender.

NEW PUBLICATIONS.

Financial Review of 1875.—This is an annual publication of the well known and trustworthy Commercial and Financial Chronicle, and may be presumed to be prepared with the care and intelligence that characterize that excellent paper. It begins with a short history of the business of the money market during the year, in which are given the prices at the beginning of each quarter of several of the leading exports, values of imports and exports, New York Clearing House quarterly statements for two years, ruling interest rates for call loans and prime paper for every week; sketches of the prices of gold, foreign exchange and United States, municipal and railroad bonds, and of railroad stocks. Detailed statistics of imports and exports are given, of both quantities and values, for the bonds, and of railroad stocks. Detailed statistics of imports and exports are given, of both quantities and values, for the fiscal year ending with June last, and a separate statement of New York commerce for the calendar year. Then follow statistics of banking, of failures, valuable tables of prices for five years of leading exports and imports; railroad statistics giving stock, debt, cost, passenger earnings, freight earnings, total earnings, working expenses, net earnings and rate of dividend of "representative railroads" in each section of the country for three years; a table of United States land grants; the elaborate and valuable account of "Railroads in Default since the Panic of 1873" which was published in the Chronicle in January, and and valuable account of "natiroads in Default since the Panic of 1873" which was published in the Chronicle in January, and which we have mentioned heretofore; a few railroad earnings for 1875; a number of tables for investors; a brief account of the processes and phraseology of stock speculations; prices of gold since 1861, and tables of prices of United States, State gold since 1861, and tables of prices of United States, State and various railroad securities each month for several years,—railroad securities for four years. It closes with the quite elaborate review of cotton and cotton spinning in the United States for the last cotton year which appeared in the Chronicle.

The matter so collected is that part of the contents of the Chronicle which most of its readers require for future reference, and it is here easily accessible. Altogether it makes a volume of 64 pages like those of the Chronicle.

ence, and it is here easily accessible. Altog volume of 64 pages like those of the *Chronicle*

Information Concerning Tunnels Wanted.

Mr. Henry S. Drinker, an engineer who has for some time made a special and most extensive study of the subject of tun-nels, and has moreover had profitable experience in connection nels, and has moreover had profitable experience in connection with them, is preparing a work on American tunnelling which is intended to be as complete as possible. By the circular printed below it will be seen that Mr. Drinker solicits the contribution of materials bearing on the subject by engineers or others who have or may have data which may serve to illustrate the history or the methods of American tunnel construction. Mr. Drinker issues this circular after having collected all the material, printed or otherwise, which he has been able to find after months of research, and securing the assistance of a large number of engineers who have had experience in this special field. There is doubtless a great deal of information on the subject which remains buried, as it were, and can only be brought to light by the act of the individuals possessing it. Ordinarily, they cannot make known this knowledge without considerable labor. Mr. Drinker's enterprise gives them an opportunity to do so with the slightest effort on their part and the greatest benefit to the engineering profession. His qualifications for the work are excellently demonstrated by his paper on the Musconetcong Tunnel (written while he was his paper on the Musconetcong Tunnel (written while he was resident engineer of that work), read about a year ago before the Institute of Mining Engineers, and published in the Eadroad Gazette of June 5 and June 12 last year (pages 227 and 239). The assistance of the persons to whom the following circular is directed will make practicable a work of exceptional

PHILADELPHIA, Pa., March 6, 1876.

The subscriber is engaged in preparing a general treatise on American Tunnelling, to show both our record in the past and the present methods in vogue.

No work of the kind has ever been compiled in America, and the only English record is Mr. Simm's account of the method adopted in the construction of two tunnels in 1844.

For every new tunnel that is started, engineers are generally put to a vast amount of unnecessary trouble in looking up records of tunnels wherever they may be found, so as to determine on the most advisable cross-section to adopt, if in

rock; and what thickness of masonry has been deemed advisable in soft ground, what rate of progress has been attained in various materials, and at what cost, etc., etc. Except in the case of a few isolated papers read before our engineering societies, there are no authentic printed records attainable.

Among those read before the American Society of Civil Engineers, may be cited, "Tunnels of the Pacufic Railroad," by Jno. R. Gillis, Esq. "Sketch of the Detroit River Tunnel," by J. E. S. Chesbreugh, Esq., and "Nesquehoning Tunnel," by J. Dutton Steele, Esq. Also a paper was read in February, 1875, before the American Society of Muing Engineers, on the "Musconetong Tunnel" (Lehigh Valley Railroad Extension), by the subscriber.

Now if engineers throughout the country will assist in the

before the American Society of Mining Engineers, on the "Musconetcong Tunnel" (Lehigh Valley Railroad Extension), by the subscriber.

Now if engineers throughout the country will assist in the work of collecting data, and will kindly forward any facts in their possession, the combined information, if properly collated and arranged, would be of much value. To this practical record of American work will be added a condensed record of the history of European tunnelling, now being prepared abroad, with tables showing the location, length, cost, rate of driving, machinery used, etc., etc., in the construction of the principal tunnels showed, etc., etc., in the construction of the principal tunnels abroad. Heturns of South American work have also been applied for, which will be especially interesting, owing to the little that is specifically known of the heavy work done there of late years.

Will you kindly assist in the work, by sending any data, never mand how small, or in what shape, you may have and can conventently forward?

Should you desire it, their safe preservation and return will be guaranteed on receipt. Appended please find a general scheme of the subjects treated, it being proposed to cover not only large railroad tunnels proper, but also mining adits and drifts, canal and water-supply tunnels, etc., etc., the work to be ready for press probably during the summer or autumn of 1876.

Any facts bearing even remotely on the subject will be most acceptable.

Yours, respectfully, HENRY S. DRINKER.

Any data solicited concerning railroad tunnels, or mining tunnels, headings and drifts, as to their,

1. Location, length, date, time occupied in building, etc.

2. Names of engineers and contractors.

3. Nature and characteristics of material passed through.

4. Cross-section adopted through rock where self-supporting, and if loose, method of timbering and cross-section of masonry.

5. If through rock, whether top or bottom heading driven, with rate of progress and size of heading, whether driven by hand or machine labor. If by hand, number of hammers generally employed on a shift, and number of shifts per day preferred. If by machinery, what make of drill and compressors adopted.

adopted.
6. If drilling by hand or machine labor, estimate of cost per cubic yard or lineal foot or both, of heading and enlargement. If work commenced by hand labor and machinery subsequently put in, relative rate of advance, and relative cost.
7. What explosive used, and any details as to amount burnt per cubic yard of rock broken in heading and enlargement.
8. Manner of working, and rate of advance of enlargement in rock.

9. If through soft ground, (i. e. clay or deposit) size, rate of advance and manner of driving, timbering, etc., preliminary (top or bottom?) headings, with details of subsequent enlarging and arching. Cross-section of masonry adopted. Description of stone, brick or cement used.

10. Final grades and drainage adopted.

11. If shafts or slopes used, any details concerning their sizes, material passed through, rate of progress, etc.

12. What depth of open cut deemed advisable at either extermity (rock or earth cut?) before beginning to tunnel.

13. Price paid, or final cost, per cubic yard, of tunnel and shaft excavation.

14. Price paid, or final cost, per cubic yard, of tunnel masonry.

16. Price pand, or limit cost, per close yard, or tunnel masonry.

16. Total final cost of work.

Lastly, if this should reach the hands of any gentleman not personally connected with tunnel work, any information whatever, bearing even most remotely on the subject, is requested; o. o, the locality of any tunnels, naming the railroad or mining district, so that specific information may be sought. Or reference to any publications on the subject of tunnelling, whether in scientific periodicals (American or foreign), or even in the daily papers. Address,

Henry S. Drinken, Mining Engineer,

Address,
HENRY S. DRINKER, Mining Engineer,
No. 1,906 Pine street, Philadelphia, Pa.

The Institute of Mining Engineers at the Exposition.

The Centennial Committee of the American Institute of Mining Engineers, consisting of Eckley B. Coze (Chairman), Thomas Egleston, J. S. Alexander (Treasurer), R. W. Raymond, Wm. G. Neilson (Secretary), has issued the following

circular:

The city rooms of the Institute at No. 1,123 Girard street, Philadelphia, will be open day and evening, from April 1 to Dec. 1, 1876, for the use of members and associates, and of other persons, citizens or foreigners, properly introduced, Arrangements are also in progress to secure a headquarters for the Institute within the Centennial Grounds; but the special purposes of the city rooms are such as could not be so well served by accommodations exclusively in the Exhibition.

These rooms are intended to be:

1. A center of social reunion for all members and associates in the city.

These rooms are intenued to the state of the control of the contro

on.

4. An agency and directory for the convenience of members and guests in arranging tours, forwarding letters, storing

4. An agency and directory for the convenience of members and guests in arranging tours, forwarding letters, storing packages, etc.

To carry out these plans the Committee has secured, at the above address, a suite of apartments, comprising three rooms on the ground floor, a room in the second story, and a room for storage in the basement. These will be suitably furnished and attended, and provided with the daily journals, scientific periodicals, geological and professional reports, maps, port-folios of drawings of machinery, descriptions of works, guide books, railway tables, etc., for consultation; besides which, the Secretary will be prepared to furnish information, advice and letters of introduction to members or guests interested in special lines of professional inquiry, whether in the Exhibition itself, or in the country at large. It is probable that besides the ordinary social and professional use of the rooms, meetings for informal discussions will be held in them on one or two evenings of each week. A register of the addresses and movements of members and guests will be kept, so that the present or prospective address of each may be known at any time. If it shall prove desirable, a copy or abstract of this register, or so much of it as shall show the addresses from day te day of ming engineers, metallurgists, geologists, etc., present in the city, will be kept at the headquarters of the Institute in the Exhibition. In connection with this registry, the Committee will receive and forward letters, and store baggage, specimens,

etc., at the order of their owners—these facilities being extended to all members and associates of the Institute, and others who shall have become entitled by proper introduction to the privileges of the rooms.

General Railroad Mems.

ELECTIONS AND APPOINTMENTS.

Chicago, Burtington & Quincy.—The new board met in Boston, March 2, and elected the following officers: President, Robert Harris; Vice-President, C. E. Perkins; Chairman of the Board, J. N. A. Griswold; Counsel, J. M. Walker; Seeretary and Treasurer, Amos T. Hall; General Superintendent, W. B. Strong; Western Executive Committee, Robert Harris, J. M. Walker, C. E. Perkins; Executive and Finance Committee, J. N. A. Griswold, J. M. Forbes, Sidney Bartlett, Charles J. Paine. Mr. Harris has been General Superintendent for some time. Mr. Perkins was formerly General Superintendent and then Vice-President of the Burlington & Missouri River. Mr. Strong was formerly Assistant General Superintendent and has lately been General Superintendent of the Michigan Central.

New Castle & Franklin.—The officers of this company are as follows: Cyrus Clark, President and Treasurer; George C. Reis, Vice-President; J. M. Power, Secretary and Auditor; A. Vandivert, Superintendent. The offices are at New Castle, Lawrence County, Pa.

Southern Pacific.—Mr. R. M. Garratt has been appointed Freight Agent Northern Division, office at San Francisco, Cal.; C. F. Smurr, Freight Agent Los Angeles Division, office at Los Angeles Carratte eles, Cal.

Angeles, Cal.

Grand Rapids & Indiana.—At the annual meeting in Grand Rapids, Mich., March 1, the old board was re-elected, as follows: W. O. Hugbart, H. I. Hollister, Grand Rapids, Mich.; I. G. Waite, Sturgis, Mich.; Pliny Hoagland, F. P. Randall, Fort Wayne, Ind.; Mancel Talcott, Chicago; J. N. McCullough, Thos. D. Messler, Wm. Thaw, Pittsburgh; John P. Green, George B. Roberts, Thomas A. Scott, Philadelphia; Robert B. Potter, New York.

York.

Colorado Central.—Mr. O. S. Lyford, General Superintendent of the Kansas Pacific, has been appointed General Superintendent of this road also.

Louisville Padwoah & Southwestern.—Mr. T. J. Fitzgerald has been appointed Auditor in place of E. T. Calvert, resigned. His office is at Louisville, Ky.

Memphis & Little Rock.—Mr. John W. Goo lwin has been appointed Treasurer, with office at Little Rock, Ark.

pointed Treasurer, with ofnce at Lattle Rock, Ark.

St. Paul & Pacific.—In accordance with the terms of the scheme of arrangement with the bondholders, the Amsterdam committee of the latter have designated the following persons to act as directors in the bondholders' interest: John S. Barnes and Henry M. Baker, of the iron firm J. S. Kennedy & Co.; A. G. Dulman, of Dulman & Scharff, bankers, and William H. Scott, of the law firm of Chapman, Scott & Crowell, all of New York.

New York.

Ohio & Mississippi.—Mr. C. Cole, formerly of the Toledo, Wabash & Western, has been appointed Superintendent of the Louisville Division of this road.

Memphis & Little Rook.—At the annual meeting in Little Rock, Ark., Feb. 16, the following directors were chosen: H. L. Brinkley, John D. Adams, S. R. Cockrell, Wm. H. Farrington, Colton Green. The board cected H. L. Brinkley, President; J. D. Darden, Secretary and Treasurer; M. B. Pritchard, General Superintendent and Engineer.

West Florida & Modelle. The officers of this compensations.

West Florida & Mobile,—The officers of this company are as follows: President, Thomas G. Wagstaff, New York; Vice-President and General Manager, E. M. Cheney, Jacksonville, Fla.; Treasurer, D. W. Hendrickson, New York; Secretary, Austin Stevens, New York.

Fla.; Treasurer, D. W. Hendrickson, New York; Secretary, Austin Stevens, New York.

Wisconsin Railroad Commission.—Governor Ludington has appointed Mr. Dans C. Lamb Railroad Commissioner under the Yance law, which provides for one instead of the three which formed the Commission under the Potter law.

Chicago, Rock Island & Pacific.—From March 1 and until further notice, the Baggage Department of this road will be in charge of Mr. J. D. Marston, as General Baggage Agent. Monthly reports of extra baggage collections will be forwarded to E. St. John, General Tieset Agent, as heretofore. All other reports and communications relative to the Baggage Department should be addressed to Mr. Marston, at Chicago.

Cleveland, Cohumbus, Cincinnath & Indianapolis.—At the annual meeting in Cleveland, O., March 1, the following directors were chosen: H. B. Hurbut, J. H. Devereux, T. P. Handy, L. M. Hubby, S. Burke, James Barnett, Amos Townsend, Cleveland, O.; B. S. Brown, Columbus, O.; R. M. Shoemaker, Cincinnati; Hugh J. Jewett, Herman R. Baltzer, F. L. Leland, Walton Furgeson, New York. The board is the same as last year's except that Mr. Furgeson takes the place of Stillman Witt, deceased. The board subsequently met and re-elected the following officers: J. H. Devereux, President; H. B. Hurlbut, Vice-President; George H. Hussell, Secretary and Treasurer; George S. Russell, Assistant Secretary and Treasurer; Alfred Ely, Auditor and Registrar; Lucien Hills, General Freight Agent; S. F. Fierson, General Ticket Agent; A. J. Smith, Assistant General Ticket Agent; L. S. Young, Master Mechanic; Wm. F. Smith, Master Car Builder; E. C. Sheldon, Paymaster; The United States Trust Company, of New York, Transfer Agent.

Cincinnati & Springfield.—At the annual meeting recently the following directors were chosen: H. B. Hurlbut, J. H.

Transfer Agent.

Cincinnati & Springfield.—At the annual meeting recently the following directors were chosen: H. B. Hurlbut, J. H. Devereux, T. P. Handy, S. Burke, Amos Townsend, James Barnett, Cleveland; R. M. Shoemaker, M. C. Shoemaker, Cincinnati, Augustus Schell, New York. The board elected H. B. Hurlbut, President; M. C. Shoemaker, Secretary. The road is leased to the Cleveland, Columbus, Cincinnati & Indianapolis.

leased to the Cleveland, Columbus, Cincinnati & Indianapolis.

Ksokuk, Galesburg & Chicago.—The first board of directors of this new company is as follows: Clark E. Carr, W. Selden Gale, O. T. Johnson, C. H. Matthews, John C. Stewart, D. H. Frisbie, Geo. W. Brown, A. Kitchell, B. F. Arnold, A. C. Clay, W. W. Washburn, J. N. Reece, B. Lombard, Jr., S. H. Ferris. The officers of the company are: C. H. Mathews, President; W. Selden Gale, Vice-President; O. J. Johnson, Treasurer; A. Kitchell, Secretary; M. H. Chamberlin, General Manager; C. Hamilton, Chief Engineer. The office of the company is at Galesburg, Knox County, Ill.

Indianapolis Fresht Agents' Association.—This association as organized recently by the election of the following officers: . J. Perkins, President; C. F. Holliday, Vice-President; H. S. Yatson, Secretary and Treasurer.

Watson, Secretary and Treasurer.

Lehigh Coal & Navigation Co.—At the annual meeting in Pailadelphia, Feb. 29, Mr. E. W. Clark was re-elected President, with the following board of managers: Francis R. Cope, Francis C. Yarnall, Fisher Hazard, Charles Parish, Charles Wheeler, George Whitney, Alexander Biddle, John Leisenring, James M. Wilcox, Edward Lewis, T. Charlton Henry.

Union Pacific.—At the annual meeting in Boston, March 8, the following directors were chosen: Oliver Ames, Elisha Atkins, Sidney Dillon, G. Dexter, Benjamin E. Bates, Oliver Ames 2d, James D. Smith, Charles J. Osborne, Samuel M. Mills, Jay Gould, Exra H. Baker, S. H. H. Clark, Joseph Richardson, John Sharp and G. M. Dodge, Mr. Exra H. Baker succeeds Exra H. Baker, Sr., deceased, and S. H. H. Clark replaces George

O. Scott; the others are re-elected. The board re-elected Sidney Dillon, President; Elisha Atkins, Vice-President; E. H. Rollins, Secretary and Treasurer.

PERSONAL.

—Mr. Camille d'Invilliers, a prominent member of the Phila delphis Board of Brokers and a director of the Philadelphia & Erie, the Pittsburgh, Titusville & Buffalo and several mino-companies, died in that city March 1.

Mr. Samuel C. Hough, formerly General Passenger Agent he Pittsburgh & Connellsville road, is now agent for dall, Nelson & Perkine' steamship line at Santa Monics, the sea-port terminus of the Los Angeles & Independence l. Mr. Hough has been residing at Santa Monica for real months past.

-Mr. J. L. Rogers has resigned his position as General Freight Agent of the Boston, Concord & Montreal Railroad.

—Mr. E. T. Calvert has resigned his position as Auditor of the Louisville, Paducah & Southwestern road.

—Mr. The mas B. Stoddard, an old citizen and prominent lawyer of L. Crosse, Wis., died in that city Feb. 24, aged 75 years. He was the original projector of the Southern Minne-sota road and was President of the company from 1864 to 1871.

—Mr. N. C. Munson, a well-known railroad contracter, who as been engaged on a number of New England roads and now as a heavy contract on the Troy & Greenfield, is reported to have suspended payment. The amount of his liabilities is not

—Mr. H. D. Wallen, Jr., for several years past Superintendent of the Northern Division, Grand Rapids & Indiana Railroad, has resigned that position and bought the Michigan Iron Works in Grand Rapids, Mich., to the management of which he will devote himself hereafter.

ANNUAL REPORTS.

[For other annual reports see pages 107 and 116.]

Ohioago, Burlington & Quincy.
The following is based on the President's report, which alone has been published as yet. It is for the calendar year

alone has been published as yet. It is for the calendar year 1875.

The company at the close of the year had added to their system by lease the new Albia, Knoxville & Des Moines Railroad, 38 miles long, making a total of 1,296.81 miles of railroad under its management, but the new road was worked but a few weeks in 1876, and the average mileage worked that year was 1,268. All the lines are virtually owned by the company, the rentals of leased branches consisting in every case, we believe, in the payment of in the interest on the funded debt of those branches, the stockholders having absolutely no rights so long as this interest is paid. During 1875 the consolidation with the Burlington & Missouri River Railroad was completed, that company conveying to the Chicago, Burlington & Quincy all its property, though the organization of the former is maintained for convenience, and the shares in it exchanged for Chicago, Burlington & Quincy shares are held by trustees for the last-named company.

The following statement of capital stock account is given in the report:

Making total amount of B. & M. R. \$7,613,892 51 Total B. & M. stock outstanding...... 2,412,732 51

Making aggregate amount of stock out-standing on 31st ult. (\$21,213 per mile) \$27,512,842 51 The funded debt of this company at the date of the last report, including the contingent indebtedness of its branch bonds and the bonds of the Burlington & Mis-souri River Railroad Company, was \$27,381,075 This has been increased during the year-

\$28,370,975

ount of bonds outstanding on Dec. 31... (\$21,283 Giving amount of botals dust statements at 227,839,515 of the Burlington & Missouri River bonds included in this statement, \$1,337,150 are convertible into stock, and are being rapidly converted. The balance of the Burlington & Missouri River funded debt consists of land-grant bonds, which at the close of 1875 was not \$200,000 greater than the land-grant sinking fund.

Per mile of road there is outstanding:

R31,300

The virtual cost to the company of the new Albia, Knorville & Des Moines branch of 33 miles was a trifle less than \$14,000 per mile in 5 per cent. bonds, making the annual cost the arrespond in funded data.

The oner mile.

The increase in funded debt during the year was \$58,500; the average interest based on the amount outstanding at the beginning of 1876 was about 7.36 per cent. The exchange of branch bonds bearing 8 per cent. for 7 per cent, bonds of 1968 tends to reduce this rate. The sale of its 5 per cent, bonds of 1968 tends to reduce this rate. The sale of its 5 per cent, bonds last year for 86.41 shows that with its present credit the company can borrow money on much better terms, and will be able to retire the outstanding debt at maturity with bonds drawing a lower rate of interest.

The construction account was increased during the year by \$894,396.10, a large part of which is the excess of cost of steel over iron rails and of iron and masonry over wooden bridges and culvarts.

1876

Sid-

neral tor of inent ged 75 linne-1871. who d now ted to

rir sys-Rail-ailroad but a at year npany, we be-lebt of

iven in

ey Rail-is \$19,-e share shares tailroad er, trus-

00,110 00

12,732 51 12,842 51

27.381,075

28,370,875

27,839,575 d in this are being Missouri h at the and-grant

ia, Knox-less than nual cost

| he earnings and expenses were : | lailroad Earnings. | In the Delaware & Hudson Canal Company's shops at Green |
|---|---|--|
| 1875. 1874. Inc. or Dec. P. c. | Earnings for various periods have been reported as follows: | sland, N. Y., the working hours have been increased from ight to ten but without any increase in wages. A number of |
| engers 2,677,942 44 2,608,054 29 Inc 69,888 15 2.7 cellaneous. 557,888 36 392,650 58 Inc 165,237 78 4.2 | hicago & Alton \$4,656.764 \$5,126,228 Dec \$469,464 9.2 | nen have been discharged. The Edgar Thomson Steel Works will begin running o louble turn March 13, and thereafter their average week! |
| lange 52,912 86 Inc . 52,912 86 | Net earnings \$2.052,639 \$2.236,877 Dec., \$284,238 12.2 | product of steel rails will exceed 1,000 tons, or 50,000 tons per annum, almost the largest amount ever turned out from |
| 10 *198,703 13 Dec. 198,703 13 | Percent.of expenses. 55.92 54.41 Inc. 1.51 2.8 Devoland, Columbus, | single rail mill. During February the Pennsylvania Steel Works at Baldwin |
| ting exp'ses 1 taxes 6,430,122 80 6,513,512 39 Dec 83,389 80 1.3 | Cincunnati & Indian- apolis | near Harrisburg, produced 5,000 gross tons of ingots with two |
| earnings \$5,361,238 44 \$5,131,805 13 Inc \$229,433 31 4.5 | Net earnings \$1,047.841 \$1,066,451 Dec \$19,110 1.8 | The Danforth Locomotive Works at Paterson, N. J., has received a contract to alter a number of locomotives from wide |
| st on bonds rued or paid. 2,014,709 34 1,958,892 10 Inc 55,817 24 2.8 | Earnings per mile 8,005 9,011 Dec 1,006 11.2 Per cent. of expenses. 72.25 74.90 Dec 2.65 3.5 | standard gauge for the Delaware, Lackawanna & Western Company. The work is to be done as quickly as possible and large force will be put on at once. |
| Balance \$3,346,529 10 \$3,172,913 03 Inc \$173,616 07 5.5 of which were paid— | Expenses 636,147 773,648 Dec. 137,501 17.8 | The Dickson Company at Scranton, Pa., will also have number of Delaware, Lackawanna & Western engines to alte |
| vidends\$2,685,835 59 \$2,661,089 25 | Earnings per mile. 11,167 15,196 Dec 4,629 26.5 | The Watson Manufacturing Company at Paterson has orde for a \$25,000 iron trestle for the Tioga Railroad, two iron tre |
| ransfers to inking fund. 186,897 50 | Delaware & Ravitan | ties for the Boston & New York Air Line and several orders f architectural iron work. |
| Total \$2,930,934 58 | Expenses 541,035 768,417 Dec. 227,382 29.6 | The Passaic Rolling Mills at Paterson are about closing contract for iron beams and girders for the New York Elevat |
| year 415,594 52 | Net earnings \$526,625 \$552,102 Dec \$25,477 4.6 Per cent. of exp's 50.67 88.19 Dec 7.52 12.9 Pennsylvania, Main | Railroad. The car-wheel works of J. & N. C. Scoville at Buffalo, N. 3 are running on full time with about 60 men and are making |
| Probably included in "miscellaneoue" in 1875. ut of this balance were paid: | Line | and some smaller roads. |
| 1875. 1674. idends | Net earnings \$8,195,296 \$9,285,854 Dec. \$1,180,648 12.7 Earnings per mile. 51,296 56,702 Dec. 5,406 9.5 | The Skinner & Gifford Manufacturing Company at Dunki N. Y., is building two turn-tables for the Texas & New Orles |
| nsfer office expenses | Per cent. of exp's. 55.86 54.26 Inc. 1.60 2.9 Pennsylvania, Br'chs \$2,129,308 \$2,343,040 Dec. \$213,732 9.1 | Railroad. The Pennsylvania Railroad shops at Meadows Station. N. |
| king fund 156,897 50 3,000 00 | Expenses 2,087,125 1,688,041 Inc., 399,084 23.6 | have turned out some new passenger cars for the West Jer- Railroad. |
| Total, \$2,930,934 58 \$2,747,519 28 Net surplus of year\$415,694 52 \$425,393 75 | Net earnings 42,183 3654,999 Dec. \$612,816 93.6 Earnings per mile 3,893 4,515 Dec. 622 13.8 Per cent. of exp's 98,02 72.04 Inc. 25.08 36.1 | The Eric car shops at Elmira, N. Y., are busy on new passe ger work. |
| surplus at beginning of year 3,945,992 75 3,520,599 00 | United New Jersey. \$8,643,924 \$8,700.969 Dec., \$57,045 0.7 Expenses 5,894,741 6,330,033 Dec., 435,292 6.9 | A New Plan fer Heating Cars. A Chicago man throws out this suggestion in the Journal |
| Standing to credit of income ac't\$4,361,587 27 ount credited to sinking fund taken come earnings | Net earnings \$2,749,183 \$,2370,936 Inc \$378,247 16.0 Earnings per mile. 31,319 31,525 Dec 206 0 7 | that city: "I have a plan to heat cars of all kinds that entit does away with the chances of burning in case of accide |
| om earnings | Per cent. of exp's 68.19 69.26 Dec 1.07 1.5 Two months ending Feb. 29: | I would use no stoves, hot water or steam, but would use r hot shot that weigh 160 pounds each placed in a box under |
| There were at the close of 1875, besides this surplus, the ount of \$816,625.83 in the Burlington & Missouri River land- | 1876. 1875. Central Pacific \$1,981,000 \$1,870,097 Inc., \$90,903 4.9 | heat the car for four hours: the turnaces for heating to |
| ant sinking fund, derived from the sale of lands, which goes pay that company's land-grant bonds, now part of the obli- | Chi., Milwaukee & St. Paul | there would be no stove in the car to burn the passengers |
| tion of the Chicago, Burlington & Quincy, and \$346,605.69 and noting to credit of profit and loss and local aid account, most | I linois Central | the Harlem road. Mr. Holmes, of the South-Side Horse R |
| which has been applied to construction in lows. T. ese ns make a total surplus of \$6,888,543.83. | St. Louis, Kan. City & No | road Company, has given it a trial, and is pleased with working." |
| Per average mile of road worked the earnings and expenses are: | Month of January: Central Pacific \$1,000,000 \$906,159 Inc \$93,841 10.4 | Something similar to this is in use on the continent of rope, and the idea is by no means a new one, as many can |
| 1876. 1874. Inc. or Dec. P. c. 93.00 \$9.213 Inc. \$87 0.94 95.01 \$1.50 Dec. 81 1.60 | Houston & Texas Central | tify who remember the hot bricks, flat-irons, etc., which tigrandmothers used to take with them to the stoveless churd of old times. |
| | Ind., Bloom & West 142,649 96,824 Inc 45,825 47.3 Loxisville, Cin. & Loxington \$82,635 | |
| terest on funded debt 1,589 1,550 Inc 39 2.51 | Expenses \$60,707 | OLD AND NEW ROADS. |
| Balance | Not earnings \$21,928 | Delaware & Bound Brook. The New York & Philadelphia New Line has been comple |
| nd at a price of \$11.70 per acre, and with an average expense 90 cents per acre. There remains of the land grant 60,371½ | Toronto, Grey & Bruce | so far as track laying is concerned, by the placing of the rail on the Delaware & Bound Brook road, and a train w |
| res. The report, which is signed by J. M. Walker, President, says: | Month of February: Chicago, Milwaukoo & | March 6. Some work in the way of ballasting and finish |
| By the provisions of a contract between the Quincy Bridge empany on the one part, and the Hannibal & St. Joseph, the | 8t. Paul | public will very oon have the choice of two lines under di |
| oledo, Wabash & Western, and the Chicago, Burlington & uincy Bailroad Companies of the other part, in virtue of which oney was raised for the construction of the bridge, the rail- | Michigan Central \$548,669 \$441,623 Inc \$107,046 24.2 Ohio & Miasissippl 293,039 248,180 Inc 44,859 18.1 St. Louis, Kan. City & | ent managements between New York and Philadelphia, new line is made up of the North Pennsylvania main line f |
| and companies agreed jointly and severally to pay, in addition the moneys necessary to maintain and operate | No | Philadelphia to Jonkintown, 9 miles; the Delaware R Branch of the same road, from Jenkintown to Yardleyv 20½ miles; the Delaware & Bound Brook, from Yardleyvill |
| be bridge, the sum of \$175,000 in equal semi-annual payments | Canada Southern \$110,363 \$34,611 Inc \$75,754 218.9 International & Great | Bound Brook, 27 miles, and the Central of New Jersey, |
| any. In the same contract it is provided that in case the | Northern 87,007 84,964 Inc. 2,133 2.5 Third week in February: | Bound Brook, 27 miles, and the Central Drook, Por a Furey, if Bound Brook to New York, 31½ miles, being 88 miles in or a mile less than the existing line. The Jersey section, the Delaware & Bound Brook, is controlled |
| oses the deficit shall be made up by the railroad companies a the prescribed proportions. In consequence of the opening | Denver & Rio Grande \$8,003 \$5,965 Inc 2,038 34.2 Kansas Pacific 53,585 38,861 Inc 14,724 37.9 St. Louis, Iron Mt. | substantially the same ownership as the North Pennsylvs Of the new line the 471/2 miles from Jenkintown to Bound B |
| f competing routes over other bridges, and the necessity of educed rates of toll, the receipts from the b.idge have lately | & 90 94,500 82,865 Inc., 11,635 14.0 Week ending Feb. 11: | is new. The depot of the North Pennsylvania is well loc for general Philadelphia business, but the existing line wo |
| ot been sufficient to meet these demands; and up to the 31st 11. this company has been called upon and obliged, by the outract and by reason of the failure of the other companies, to | Great Western £15,637 £13,773 Inc £1,864 13.5 Week ending Feb. 12: | by the Pennsylvania will claim some advantages for the teunial traffic, though this may be in great measure equal |
| unish their full pro rate proportions, to advance \$89,602.36, 42,225.13 of which is due from the Hannibal & St. Joseph | Grand Trunk £40,300 £24,900 Inc £15,400 61.8 Coal Movement. | by running the North Pennsylvania trains over the Richn Branch of the Reading road and then on its main line to |
| oad, \$9.184.23 from the Toledo, Wabash & Western Railway to | The anthracite coal-carrying lines report tonnages as follows for the two months ending Feb. 26: | this kind will be made. The new road occupies nearly |
| his company, which will be collected as soon as it can be. In ddition to this the Hannibal & St. Joseph Railroad Company s indebted to the Bridge Company in other considerable | 1876. 1875. Inc. or Dec. P. c. Del. & Hudson Canal Co 240,866 396,987 Dec., 156,121 39.3 | substantially the same ownership as the North Pennsylva Of the new line the 47½ miles from Jenkintown to Bound is new. The depot of the North Pennsylvanis is well los for general Philadelphia business, but the existing line we by the Pennsylvania will claim some advantages for the teunial traffic, though this may be in great measure equal by running the North Pennsylvania trains over the Richa Branch of the Reading road and then on its main line to Reading's Centennial depot. Doubtless some arrangemethis kind will be made. The new road occupies nearly same line projected and advocated by Mr. Thomas S. Ferne President of the North Pennsylvania more than 20 years but its construction has only become possible within the |
| Amounts. | Del., Lackawanna & Western. 213,497 388,687 Dec., 125,190 37.6 Pennaylyania Coal Co., 179,259 175,957 Inc., 3,302 1.9 | two years by the abrogation of the Camden & Amboy mone and the passage of the New Jersey general railroad law. |
| TRAFFIC AND EARNINGS. | Lehigh Div. Central of New | Indianapolis, Cincinnati & Lafavette. |
| Eastbound Rates. The statement which we made last week of the rates from | Dan., Hazleton & Wilkesbarre 3,522 3,056 Inc 466 15 5 Phila & Reading | This company and the Cincinnati, Lafayette & Chic |
| the Northwest to the Atlantic, which went into effect March 1, was erroneous. The change extended to grain and flour alone | Northern Central | Central at Kankakee, have agreed upon a substantial con |
| and not to fourth-class freight, which remains as it was. The | Totals | both to be still maintained. President Ingalls, of the Indi polis, Cincinnati & Latayette, will have the managemen |
| Chicago to— 1. 2. 3. 4 Grain | sylvania Railread, for the two months ending Feb. 26, was as follows: | President, of the consolidated line, President Earl of the company acting as Vice-President. |
| New York \$1.50 \$1.10 \$0.85 \$0.50 \$0.46 boston 1.60 1.20 0.90 0.85 0.44 Philadelphis 1.35 0.99 0.77 0.45 0.43 Philadelphis 1.36 0.99 0.77 0.45 0.32 | 1876. 1875. Inc. or Dec. P.e. Coal Port for shipment 4,701 Inc 4,701 | New Jersey Midland. The Main Committee now claims that it has secured for |
| Paltimore. 1.31 0.96 0.74 0.43 0.31 | South Amboy for shipment. 81,830 16,167 Inc. 65,663 406. | |
| Bulk hogs and Grass Chicago to— Bulk hogs and Grass meat, beef, Cheese, seeds | Jersey lines | Committee. The latter also claims to have a majority. Mean it is stated that the trustees have instructed their couns |
| New York 0.55 0.70 0.65 0.60 Boetton 0.60 0.75 0.70 0.65 Paladelphia 0.50 0.43 0.59 0.50 | Total | press the foreclosure of the first mortgage and to obt |
| Baltimore0.481/4 0.61 0.57 0.583/4 | Other coal tonnages, bituminous and semi-bituminous, are reported as follows for the same period: | Northern Central. |
| Flour per barrel is double the charge on grain per hundred Bozed meat takes the fourth-class rate. | 1876. 1875. Inc. or Dec. P.c. | the Superior Court, and holds that this company is liab |
| Cotton Movement, Receipts at the seaboard and exports for the crop year from Sept. 1 to March 3 have been, in bales: | Tyrone Div., Penn. Reilroad, Glearfield coal | lexemption on the ground that the original charter of the |
| 1875-76. 1874-75. Increase. P. c | Dateily in it, or an in it | was a contract which the State could not repeal. It was |
| Recotyts 3,404,927 2,914,259 490,668 16. Exports 2,098,056 1,703,109 324,947 23. | | business and not on property. The Court holds against both points. The tax, which is one-valf of one per cent. or gross earnings, will now be collected. |
| From Feb. 5 to March 3 the movement was: Increase. P. c. | THE SCRAP HEAP. | gross earnings, will now be collected. New Orleans Pacific. |
| Receipts 338,743 278,467 60,256 21. Exports 346,100 229,168 116,992 56. | | The charter passed for this company by the Louisiana L |
| Thus the February increase has been greater in proportion than that for the year, | contracted to furnish 18 iron cars on La Mothe's patent to Barnum's new traveling show. The contract for the Green River bridge on the Troy & Green | intere provides that the northwestern terminus shall to |
| Flour and Graip Movement. Baltimore grain receipts for Pebruary were as follows: | | Marshall. |
| | pany of Pittsburgh. The contract price is 146,850. The Phonix Iron Company made a general reduction in wage | Indianapolis, Bloomington & Western. A new plan of reorganization has been presented by a mittee of which Mr. Sumner R. Stone is chairman, which |
| Wheat, bushels 93 856 77 577 Inc. 16 279 21 | March 1, varying from 10 to 20 the cont, | mittee of which Mr. Sumner R. Stone is chairman, which be briefly summed up as follows: |
| Corn. bushels 2,719,138 707,280 Inc. 2,011,869 284. Osts, bushels 64,035 40,879 Inc. 233,346 87. Bre, bushels 3,574 5,873 Dec. 2,299 39. | two new Siemens-Martin steel furnaces, which it has been con structing. The Todd & Rafferty Machine Company at Paterson, N. J. | |
| Total, bushels | The Todd & Hafferty Machine Company at Paterson, N. J. has an order for eight fireless engines for a street railroad in | 1. First-mortgage bonds to the amount of \$5,700,000 to 4 per cent, interest for two years, 5 per cent, for two years in |

| Pear ending Dec. 31: | 1875 | have b | 874. | Inc. | or Dec. | B - | Is |
|---|--|--|--------------------------|--|----------------------------|--|--|
| icago & Alton | \$4,656.764 | 85,120 | 5,228 | Dec | \$460,464 185,226 | 9.2 6.6 | m |
| Per cent. of expenses. | 85.92 | \$2,23 | 7,899 | Dec Dec Inc. | \$284,238 724 1.51 | 12.2 9.2 2.8 | pi ai si |
| Cincinnati & Indian | | 7 \$4,246 6 3,18 | 8,606 2,155 | Dec | \$474,388 455,279 | 11.2 14.3 | ne |
| Net earnings Earnings per mile | \$1,047.34 8,000 | \$1,06 | 8,451 9,011 | Dec | \$19,110 1,006 | 1.8 | e si p |
| Expenses | \$893,37 636,14 | 7 77 | 5,648 3,648 | Dec | \$322.278 137,501 | 26.5 17.8 | h |
| Per cent. of exp's | 71.2 | 7 1 | 5,196 | Dec Inc | \$184,777 4,020 7.57 | 41.8 26.5 11.9 | fi |
| Canal | \$1,067,76 541,03 | 0 \$1,32 5 76 | 0,519 8,417 | Dec | \$252,859 227,382 | 19.1 29.6 | 8 |
| Net earnings Per cent. of exp's ennsylvania, Main | 50.6 | 17 | 58.19 | Dec. | 7.52 | 12.9 | 1 |
| Expenses | 10,258,78 | 8 11,0 | 13,477 | Dec. | 754,789 | 6.9 | 1 |
| Earnings per mile. Per cent. of exp's | 51,29 55.8 \$2,129.80 | 6 6 8 \$2.3 | 54.26 | Inc. | 5,406 1.60 | 9.5 | 1 |
| Expenses | 2,087,12 | 1,6 | 88,041 | Dec. | 399,084 | 93.6 | 10 |
| Earnings per mile. | 3,89 | 3 | 4,815 72.04 00.969 | Inc. | 25.98 \$57,045 | 13.8 36.1 0.7 | 1 |
| Net earnings | \$2,749,18 | 3 \$.23 | 70,936 | Inc. | 435,292 | 16.0 | |
| Per cent. of exp's | Feb. 29: | | | Dec. | | 1.5 | 1 |
| hi Milwaukee & S | \$1,961,00 | 00 \$1 | ,870,0 | | | | - 1 |
| linois Central | 1,196,5 | 6 \$94 | 78,902 12,525 | Inc. | \$124,711 \$124,711 | 11.0 13 2 21.9 | 1 |
| & No | y | | | | | 0 | 1 |
| Central Pacific Iouston & Texas Ce | n- | | | | | | |
| nd., Bloom & West. Lonisville, Cin. & Lexington | 142,6 | 49 | 96,8 | 24 1 | nc 45,82 | 5 47.3 | 3 |
| Net earnings | \$60,7 | 28 | | | | - | - |
| Mobile & Ohio Foronto, Grey | 229,2 | 134 1 | 96,72 | inc. | . 32,898 | | |
| Month of February: Chicago, Milwaukee | k | | | | - 1 | | |
| Illinois Central Michigan Central | \$548,6 | 126 69 \$4 | 48+,68 141,62 | o Inc. | . \$107,046 | 26.3 | 2 |
| St. Louis, Kan. City No | 284, | | | | | | |
| Canada Southern International & Gre | \$110,2 | | | | | | |
| Third week in Febr Denver & Rio Grand | uary: | | | | | | |
| St. Louis, Iron M | it. 94, | | 82,868 | | | | |
| Week ending Feb. 1 | £15, | | | | | | |
| Ceal Movement. | | | | | | | |
| Del. & Hudson Cans | 1 Co | 1876. 240,866 | 39 | 6,987 | Inc. or Dec Dec. 156,12 | P. 6 1 39. | В. |
| Pennsylvania Coal | 30 | 213,497 179,259 | 38 17 26 | 8,687 5,957 | Dec 125,19 Inc 3,30 | 0 37. 2 1. | 9 |
| | | 253,342 3,522 | 2 | 7,005 3,056 | Inc., 46 | 6 15 | ñ |
| Northern Central | ******** | 24,365 | 7 | 6,260 | Dec 51,89 | 5 68, | 0, |
| The anthracite | coal tonne | age of t | he Be | elvider | e Division | , Penn |)- |
| sylvania Railroad, follows: | , for the t | | | | | | |
| South Amboy for a Local distribution | on New | 4,701 81,830 | 1 | 6,167 | Inc 65,66 | 8 406 | .2 |
| Company's use | | 8,875 | _ | 4,302 | Inc. 4,57 | 3 106 | 3 |
| | | | | | | | |
| | | 1876. | 11 | 975. 9,0 1 7 | Inc. or Dec Inc. 28,65 | 6 24 | c. |
| Clearneid com | | 145,786 54,778 | 10 | 8,300 | Inc39,34 | 6 34 | .6 |
| Total | | | - | | | - | |
| | | | - | | 2 | | |
| | care adding Dec. 31: cago & Alton. Expenses. Set earnings. Carrings per mile. Per cent. of expenses Cincinnati & Indian Expenses Carrings per mile. Per cent. of expenses Canal Expenses Net earnings Per cent. of exp's. claware & Raritan Canal Expenses Net earnings Per cent. of exp's. canalylvania, Main Line. Expenses Net earnings Expenses Net earnings Expenses Net earnings Carrings Per cent. of exp's. cansylvania, Br'chs Expenses Net earnings Fer cent. of exp's. Carrings per mile. Per cent. of exp's. Carrings per mile. Per cent. of exp's. Carrings Carrings Carrings Carrings Carrings Carrings Carrings Carrings Carrings Central Pacific. Linds Contral Pacific. Contral Pacific Contral Pacific Contral Pacific Contral Pacific Contral Pacific Contral Pacific Contral Cont | Section Sect | Serial Serial 1875 | Ser ending Dec. 51: 1875. 1876. 18 | Tear existing Dec. 31 | Ser enting Dec. 31 1874, | September 2,000,135 2,789,281 Dec. 180,244 12, 23, 23, 23, 236,577 Dec. 180,256 6.5 dearnings mile 16.52 |

OLD AND NEW ROADS.

exchanged for Danville, Urbana, Bloomington & Pekin first-mortgage bonds, \$2,200,000 for Indianapolis, Bloomington & Western firsts, and \$1,500,000 for Western Extension firsts. 2. Second-mortgage bonds to the amount of \$2,600,000 to bear 7 per cent. interest, to be payable for the first five years only if earned. Of these bonds \$1,500,000 to be issued to present holders of Indianapolis, Bloomington & Western second-mortgage bonds, and \$1,100,000 to holders of Western Extension

mortgage bonds, and \$1,100,000 to holders of Western Extension firsts.

3. Common stock to the amount of \$3,675,000; \$600,000 to be issued for unpaid coupons on Danville, Urbans, Bloomington & Pekin firsts; \$900,000 for coupons on Indianapolis, Bloomington & Western, firsts; \$825,000 to holders of Western Extension bonds; \$1,000,000 to holders of Indianapolis, Bloomington & Western seconds, and \$350,000 to unsecured creditors.

4. Scrip to the amount of \$6,257,550, to be convertible into stock whenever the road shall have earned and paid dividends amounting to 14 per cent, on the stock. Of this scrip \$2,475,000 to be issued to holders of Western Extension bonds; \$880,000 to unders of second-mortgage bonds; \$1,050,000 to unsecured creditors and \$1,902,550 to present stockholders.

This plan is nearly the same as the other one now pending, except that includes the Western Extension in the reorganization. It is not likely to meet with favor except among the Western Extension bondholders.

Dallas & Wichita.

Dallas & Wichita.

A contract for grading 17 miles of this road from Dallas Texas, has been let to Mr. Brennan, who will put on a force of men at once. Contracts for ties have been already let. President Clarke has gone East to negotiate for iron and equipment

East River Bridge. At a meeting of the Trustees March 6, bids for the wire rope for the temporary bridge were opened. Five bids had been received, two from England, one from John A. Roebling's Sons, of Trenton, one from New York and one from Brooklyn. They were referred to the Executive Committee.

New York Elevated.

The Rapid Transit Commissioners who have been hearing objections of property owners to the proposed route have decided in favor of the company. The company's counsel has given notice that on March 15 it will apply to the General Term of the Supreme Court to confirm the Commissioners' report. If it is confirmed, the company will be able to proceed with

Louisville, Cincinnati & Lexington.

The Auditor, Mr. Wm. Mabl, reports as follows for

| Passenger receipts | 38,465 | 72 |
|---|--------|----|
| Total earnings | | 96 |
| Total expenses (73.46 per cent.) | 60,707 | 23 |
| Net earnings \$1,481 25 State tax \$1,800 07 Construction 467 82 Louisvills, Cin. & Lexington R. B. Co 500 00 | | 73 |
| LAUGHTING, Clair & Downing | 6,009 | 14 |

West Florida & Mobile.

This company was organized sometime since for the purpose of building a railroad from the present terminus of the Jacksonville, Pensacola & Mobile at the Apalachicola River westward through West Florida to the Alabama line and thence to the city of Mobile. The distance is about 200 miles, and there is to be also a short branch to Pensacola. No work has been done as yet, but arrangements are now being made for a survey of the line.

Bangor & South Haven.

This company has filed articles of incorporation in Michigan and purposes building a narrow-gauge railroad from South Haven. Mich., to Bangor, 11 miles. The capital stock is fixed at

Toledo, Wabash & Western

Late despatches state that the Indiana Supreme Court has refused to admit the stockholders represented by the Protective Committee as parties to the foreclosure suit. There is now no obstacle to the completion of the foreclosure of the consolidated mortgage, which will be carried through without delay. On receipt of the news in New York the prior mortgages advanced from 1 to 5 per cent. in price.

St. Louis, Albia & Des Moines

This is the name of the proposed branch of the Missouri, lows & Nobrasks from Centerville, Is., north to Albia. Surveys are now being made of the line, which is about 24 miles long. At Albia it will connect with the Central Railroad of lows, the Burlington & Missouri River and the lately-opened Albia, Knoxville & Des Moines road.

Albia, Knoxville & Des moines road.

Pilot Knob & Mississippi.

It is proposed to build a narrow-gauge road from Pilot Knob, Mo., east by north to the Mississippi near St. Genevieve, about 45 miles, with a short branch from the main line to Iron Mountain. It is also proposed to continue this by building from a point on the Illinois shore opposite the Missouri terminus northward about 17 miles to the Cairo & St. Louis at Red Bud.

Chesapeake & Ohio.

Ohesapeake & Unio.

The court has authorized Receiver Wickham to rescind a contract made by the company in 1873 for the purchase of a certain tract of land in York County, Pa.

The Pittsburgh Gazette says that arrangements are being made to send oil from that city to Huntington in barges and thence over the Chesapeake & Ohio to Richmond for shipment. The managers of that road have offered to give the refiners very favorable rates and the new route will probably be traed.

Helena & Benton.

A third proposition passed by the late Legislature of Montana provides for the construction of a railroad from Helena to Benton, the head of navigation on the Missouri. The distance is about 125 miles, following the general course of the Missouri. The act authorizes the counties of Lewis, Clarke, Chateau and Meagher to issue bonds in aid of its construction to an amount not exceeding \$750,000.

Atchison, Topeka & Santa Fe.

It is reported that this company has made arrangements to lay a third rail on the Denver & Rio Grande branch from Pueblo, Col., to Canon City. There is also some talk of an extension up the Arkansas River and to the San Juan mining region by way of Saguache and the Cochetopa Pass.

Osage Valley & Southern Kansas.

The St. Louis Republican notes a report that some New York capitalists are ondeavoring to purchase the franchise of the Osage Valley Railroad Company for the purpose of building the road in the form of a narrow gauge. The charter authorizes the construction of a road from Boonville to Spring-

field, and a considerable part of the proposed line has been graded and prepared for the ties. The object of the Eastern capitalists is to cross the river at Boonville, extend the road through Cooper, Boone, Callaway, Montgomery and St. Charles counties, recrossing the river at Howell's ferry, and running to St. Louis.

Keokuk, Galesburg & Ohicago.

The managers of this projected narrow gauge road are making an active canvase for subscriptions and have arranged to begin the surveys for the road at once. The towns all along the line are urged to subscribe and the project is, apparently, exciting considerable local interest.

St. Louis, Keokuk & Northwestern.

The grading on the extension from Hannibal, Mo., southeast to Louisiana, is nearly completed and is expected to be finished by March 16. Track has been laid from Hannibal for seven miles and a large force is at wors. Another force has lately been put on to lay the iron from Louisiana northwest.

The Central Vermont and Rutland Settlement.

The Central Vermont Company as Receiver and Trustee has petitioned the Court of Chancery for authority to complete and execute the recent agreement with the Rutland Company, and a hearing has been appointed at St. Albans, March 11.

Austin & Battle Mountain.

Surveys and estimates have been completed for this proposed ine from the Central Pacific at Battle Mountain southward to ussin, Nev. The engineer's estimate of cost is \$728,700, to-sards which Lander County offers a subsidy of \$200,000.

Hannibal & St. Jeseph.

Hannibal & St. Jeseph.

Contracts have recently been made for 900 tons of steel rails and a large number of new ties to be delivered during the present month for use in repairs of track.

North Georgia & North Uarolina.

A movement is on foot to organize a company to build a railroad from Asheville, N. C., west by south through Buncombe, Haywood, Jackson, Macon and Cherokee counties, the extreme southwestern section of North Carolina, to connect with the Marietta & North Georgia whenever that road shall be completed to Ducktown or to the Georgia State line.

Parker & Karns City.

It is now proposed to extend this road from Karns City, Pa., by way of Millerstown to Butter, about 16 miles. The road is now said to be paying well, and it is claimed that this extension would bring it a great increase of business.

sion would bring it a great increase of business.

Indianapolis & Springfield.

This company has resolved to make its road of 3-feet gauge and to use iron weighing 35 pounds to the yard. The line of the road, which is now under contract, with a section of 25 miles partly graded, is from Indianapolis westward by Bainbridge and Rockville to Montezums. It occupies the same territory and almost the same location as the proposed extension to Indianapolis of the Indianapolis, Decatur & Springfield, the old Indiana & Illinois Central.

Negotiations are now pending for the formation of a company in Illinois to extend the road from Montezums to Paris or Mattoon.

or Mattoon.

Portland & Ogdensburg.

A recent amendment to the charter of this company extends the time for the final completion of the road to Jan. 1, 1880.

Recently the towns which are bonded in aid of the Vermont Division were notified that the company could not meet the March coupons due on the town bonds. Finally, however, after some duscussion, a note for six months, secured by deposit of bonds of the company, was given, on which the money, some \$6,000, was raised.

Maine Central.

Maine Central.

This company has obtained from the Legislature the desired authority to connect the tracks of the Maine Central and Androscoggin divisions in Lewiston, and to abandon the present track of the Androscoggin Division from Leeds Junction to Crowley's. This change will doubtless be made at once, when all the trains of the Androscoggin Division will be run through Lewiston and the company will be relieved of the maintenance of five miles of track which is of little or no use to it.

Bangor & Piscataquis.

The Maine Legislature has extended the time allowed for the completion of this road, and has also extended for two years the time during which the city of Bangor may loan its credit to the road.

Northern Paoific.

The Dakots Division has been reopened through to Bismarck, and trains have begun running. A considerable amount of freight is being forwarded, much of it being supplies intended for parties on their way to the Black Hills.

ror parties on their way to the Black Hills.

United States Rolling Stock Company.

The Receiver of the Missouri, Kansas & Texas Railway has just closed a contract with the United States Rolling Stock Company for a large equipment of grain cars for Texas trade. The Rolling Stock Company has also closed contracts for every one of its passenger coaches. The latter company has just paid a dividend of three per cent. iu gold on its capital of five millions.

Erie.

The bill providing for the reorganization of bankrupt companies in New York, which is specially intended to cover the case of the Erie, has made rapid progress in the Senate, although meeting with some opposition.

In consequence of the suspension of coal traffic 31 engines and the same number of train crews on the Eastern Division have been laid up. Several engines on the Delaware Division are also laid up for the same reason.

Dividends.

Dividends have been declared by the following companies:

Dividends have been declared by the following companies:
Lehigh Coal & Navigation, 2 per cent., quarterly, payable March 3.
Nesquehoning Valley, 5 per cent., semi-annual, payable March 3.
Philadelphia, Germantown & Norristown (leased to Philadelphia & Reading), 3 per cent., quarterly, payable March 3.4
New York Central and Hudson River, 2 per cent., quarterly, payable April 15.
Auction Sales of Railroad Securities.
In New York, March 1, at auction, Long Island Railroad first-mortgage bonds brought 102½; Reading & Columbia first-mortgage, 95; East Pennsylvania first-mortgage, 10½; American Dock & Improvement Co. first-mortgage, 10½; Louisiana & Missouri River first-mortgage, 94; Warren Railroad stock, 102½; South Branch (of New Jersey) stock, 85.
Union Pacific.

road stock, 102%; South Branch (of New Jersey) stock, 85.

Union Pacific.

The annual meeting was held in Boston, March 8. Mr. Gould offered a resolution that the contract between the company and the several parties who were or are beneficiaries or trustees on what is known as the Oakea Ames contract and the J. W. Davis contract, and the assignments thereof, and who may execute the same, be assented to by the stockholders, and the treasurer is authorized to execute the same. Adopted.

Another resolution by Mr. Gould, approving the contract between the road and the stockholders of the Credit Mobilier of America, was adopted.

The treasurer was authorized to execute, on behalf of the company, the draft of a bill in equity against the Credit Mobilier of America, advised by coupsel for the purpose of asserting the claims of the company against said Credit Mobilier, and enjoining the prosecution of a suit by the latter corporation against the Union Pacific Railroad, now pending in the Supreme Court of Massachusetts.

An adjourned meeting is to be held June 1.

Supreme Court of Massachusetts.

An adjourned meeting is to be held June 1.

Cumberland & Pennsylvania.

An Amaspolis (Md.) dispatch says that the bill amending the charter of this company came up as a special order Feb. 29 upon its third reading and was passed, with but one dissenting vote. The one-cent-per-ten tax on transported coal over the road for the benefit of the State was strucken out previously because of its unconstitutionality. The bill which has just passed the House by an overwhelming vote provides that or all coal transported by said company when the distance of such transportation shall not exceed five miles, a rate not exceeding four cents per ton per mile, and not exceeding three cents per ton per mile when the distance shall be more than five miles and not exceeding two cents per mile when the distance shall be charged. The reduction made is one cent per ton per mile charged. The reduction made is one cent per ton per mile on each class. The bill has been strongly pressed by all the mining companies of the Cumberland Region except the Consolidation Company, which owns the road and has, by means of that ownership, been enabled practically to control the coal business.

Pekin, Lincoln & Decatur.

Pekin, Lincoln & Decatur.

Form, Lincoln & Decatur.

Under the decree of foreclosure recently granted, John A.
Jones, Master in Chancery, will sell this road at public auction
in Springfield, Ill., April 21. The sale includes the entire road,
68 miles, and all the property of the company. Under the
terms of the decree bondholders who have deposited their
bonds are allowed to bid for the property.

Rockford, Rock Island & St. Louis.

Notice is given to holders of bonds, coupons and certificates of indebtedness of this company to present them at the office of the Clerk of the United States Lircuit Court in Chicago and receive the dividends awarded them under the decrees confirming the sale of the road.

Pacific Mail.

A meeting of the directors was held in New York, March 6, to consider a plan for relieving the company from its present financial difficulties by an issue of bonds to be offered for sale to the stockholders.

to the stockholders.

Cherry Valley, Sharon & Albany.

A meeting of the towns holding stock in this road is to be held shortly to consider what had best be done in view of the proceedings begun to foreclose the second mortgage.

Wyandotte, Kansas City & Northwestern.

The track is now laid to Buckner Hill, Mo., 23 miles eastward from Kansas City. The grading is tinished to Wellington, 11 miles further, and tracklaying is in progress. The iron for the line as far as Lexington has been bought and a considerable part of it delivered.

New York & Canada.

New York & Canada.

It is said that a contract has been let for the branch which was located some time since from West Chazy, N. Y., northeast to Rouse's Point, about 15 miles. The construction of this branch will enable trains to run to Rouse's Point direct, avoiding the detour by Mooer's Junction.

mg the detour by Mooer's Junction.

Wilmington & Western.
In the United States Circuit Court recently Receiver Canby came into court and asked for instructions in the matter of certain suits brought to recover a balance claimed to be due on the contract for the construction of the road. The Court directed the Receiver to defend the suits in the name of the company.

Worcester.

Wordster.

A pier has been commenced at the terminus on Chincoteague
Bay for the purpose of facilitating the transfer of oysters and
other freight from boats to the cars. The pier will be 200 feet
by 30, with an arm at the end 70 by 30 feet, on which a depot
will be built. Two tracks will be faid on it.

will be built. Two tracks will be faid on it.

Lafayette, Muncie & Bloomington.

In the suit brought in the United States Circuit Court on behalf of the Indianapolis, Cincinnati & Lafayette Company the Court has just decided that the crossing of the two roads near Lafayette, Ind., was on ground belonging to the Indianapolis, Cincinnati & Lafayette, and should not have been made until permission had first been secured from that company. Under this decision the crossing has been taken up. It is said that there is now a prospect for an amicable arrangement of the matters in controversy between the two companies.

Later news is to the effect that an agreement has been concluded by which this road, instead of crossing the Indianapolis, Cincinnati & Lafayette near Lafayette, will make connection with it at the former crossing place and run into the city on its track.

Minneapolis & Northwestern.

It is now proposed to go to work on this road and to buil the first section of 11 miles from Minnespolis, Minn., 10 Osseo 3-feet gauge, with wooden rails. The road can then be extend of further and iron rails laid as the business may warrant suc

Terre Haute & Worthington.

This new company has filed articles of incorporation in Indiana. The capital stock is to be \$1,000,000, and the road is to extend from Terre Haute, Ind., southeast through Vigo, Clay and Greene Counties to Worthington on the Indianapolis & Vincennes road, a distance of 40 miles.

Indianapolis & Sullivan.

Articles of incorporation have been adopted by this company and a provisional organization completed. The capital it to be \$1,000,000 with power to increase. The line of the road from Indianapolis by Monrovia, Eminence, Quincy and Bowling Green to Sullivan on the Evansville & Crawfordsville road, a distance of about 100 miles.

The Maine Legislature at its recent session passed acts authorizing this company to build a branch or extension to Fort Kent; extending the time for the final location of the road; extending for two years the time during which Bangor City may vote aid, and authorizing the town of Lyndon to lend its credit in aid of the road.

in aid of the road.

Cincinnati, Hamilton & Dayton.

Winslow, Lanier & Co., No. 27 Pine street, New York, give notice that they are now prepared to pay off the issue of \$500,000 8 per cent. bonds due June 1, 1876, at par and accrued interest, or to exchange them for new 7 per cent. bonds at 191 and accrued interest.

The same firm is offering for sale first consolidated mortgage bonds of the company having 30 years to run and bearing 7 per cent. interest. The total amount secured by the consolidated mortgage is \$3,000,000; the United States Trust Company is trustee.

By the last annual report the bonded debt of the company was \$2,250,000; deducting the \$500,000 due in June, \$1,750,000. The company s road is 00 miles long, and it works 285 more under lease, being almost sole owner of 98 miles of the leasel

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capital is ne road is and Bowl-

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road. The net surplus of earnings the last fiscal year, after paying interest and rentals, was \$197.192.75.

Grand Trunk.

Grand Trunk.

This company in London, Feb. 15, issued a circular inviting proposals for so much of the 5 per cent. perpetual debenture stock of the company as will produce £460,000. The terms of subscription were, 30 per cent. of the face of the stock payable Feb. 29, the balance April 15. Preference was to be given to stockholders of the company. From the proceeds of the issue £130,000 are to be used in paying off £71,000 International Bridge bonds, £16,000 Montreal & Champlain bonds and £13,000 due for cars and stations; the remaning £270,000 for providing for existing floating debt incurred for steel rails and changing gauge, and for providing new steel rails needed.

Gilman, Ulinton & Sprinefield.

changing gauge, and for providing new steel rails needed.

Gilman, Ulinton & Springfield.

In the United States Circuit Court at Springfield, Ill., March
1, an order was entered directing F. E. Hinckley, late Receiver,
to make a final accounting and report by March 15, or to show
cause why he should not be required to do so.

In the suit of Morton, Bliss & Co. against the company an order was entered prohibiting the removal of \$300,000 bonds now
deposited with the Fidelity Savings Institution of Chicago.

deposited with the Fidelity Savings Institution of Chicago.

Toronto, Grey & Bruce.

At a meeting of the bondholders in London, England, Feb. 16, it was stated that the total bonded debt was \$1,600,600, of which \$250,000 matured in November, and is still unpaid, and \$84,000 will mature in June next. The floating debt was \$500,000, of which \$150,000 is a lien on the equipment. It is now proposed to reorganize the company on a basis of \$1,000,000 stock and \$2,000,000 bonds, the necessary authority having been obtained from the Canadian Parliament. This would give a capital account of about \$15,300 per mile. It is proposed to issue for each of the present \$500 bonds a new \$500 bond and \$100 stock, the remainder of the stock and bonds to be used in settlement of the floating debt.

The meeting voted to approve the plan after some discussion, in the course of which it was stated that the Canadian creditors could have had a receiver appointed, but had waited to see what action would be taken at this meeting.

St. Joseph & Denver City.

what action would be taken at this meeting.

St. Joseph & Denver City.

Notice is given that the time in which the bondholders will have the right to join in the reorganization of the company and the right to exchange Western Division bonds for lands is, by order of the United States Circuit Court, limited to April 20, 1876. A motion for the final confirmation of the foreclosure sales will be made at the term of that court to be held at Omaha, Neb., on the first Monday in May.

ha, Neb., on the first Monday in May.

St. Louis & Southeastern.

Holders of Evansville, Henderson & Nashville first-mortgage bonds are requested by the committee to sign the bondholders agreement without delay. Copies can be found at the offices of the Union Trust Co., No. 71 Broadway, New York; Matthew Baird, No. 1,416 Chestnut street, Philadelphia, and J. F. Bulett, Louisville, Ky.

ot Springs.

ot Springs.

Passenger trains have begun to run regularly over this road from the St. Louis. Iron Mountain & Southern junction at Malvern, Ark., to Hot Springs. The road is 21½ miles long and of S-feet gauge; it has some high grades and sharp curves. It is well and sufficiently equipped. It will doubtiess have a considerable traffic, being the only line for passengers and supplies to the famous Arkansas Hot Springs, which are already resorted to by a very great number of invalids and others, and the number is yearly increasing.

Laurens.

The track of this road is now rebuilt from the Greenville & Columbia road at Helena, S. C., to Clinton, 18 miles, leaving 14 miles yet to reach Laurensville. Work has lately been suspended, the reason given being that the local subscribers have not paid up. The South Carolina Company, which now owns the road, declines to go on unless the promised funds are forth-coming.

coming.

Paducah & Memphis.

It is said that an agreement has been concluded between this company, the bondholders, and the Southern Railroad Association, under which the road is to be completed, a certain amount of first-mortgage bonds to be used for that purpose and to be made a preferred lien upon the property.

Delaware, Lackawanna & Western — Morris & Essex Divinian.

Delaware, Lackawanna & Western morris & Losses Living Hills.

A cave took place in the new tunnel through Bergen Hill, March 4. It was between shafts Nos. 5 and 6, where the tunnel is some 80 feet below the surface of the earth. At that point the rock was not very thick above the roof of the tunnel and the great weight of the earth above proved too much for the thin crust left. The result of the break on the surface was a sort of a well hole some 20 feet in diameter and 60 feet deep. The break is near the Jersey City reservoir and some local excitement was caused by a report that it was the result of a leak in the reservoir, which report was without foundation in fact.

St. Paul & Pacific.

St. Paul & Pacific.

St. Paul & Pacific.

Feb. 16 the Amsterdam bondholders' committee announced that it had information that the deposit of shares of main and branch lines required by section 8 of the new airangement had been made; and the committee, in accordance with section 24 of the same agreement, designated four directors, as follows: John 8. Barnes and Henry M. Baker, of J. S. Kennedy & Co.; A. G. Dulman, of Dulman & Scharff; and Wm. H. Scott, of the law firm of Chapman, Scott & Crowell, all of New York.

The committee are arranging with the company the manner in which the committee's certificates representing bonds shall be accepted in payment for the company's lands. Great quantities of the bonds had changed hands in Amsterdam just previous to this announcement. Within a fortnight the 1869 bonds rose from 12½ to 17½; the second section bonds (main line), from 21 to 28; the First Division (branch line). From 42 to 48; the consolidated loan from — to 22; and the 8t. Vincent and Brainerd extension bonds from 8 to 9. The prospect of completing the latter lines in time to save the land grant is not considered good. The Amsterdam correspondents of Dulman & Scharff are said to have made most of the purchases, and are supposed to have secured for their clients nearly one-fifth of all the issues. It is said-that contracts have been made for the sale of about 450,000 acres of the company's land, which will cancel a considerable amount of bonds.

Ohioago & Northwestern.
On the announcement in Amsterdam of the repeal of the Potter law, Chicago & Northwestern preferred shares came into great demand, and the price advanced in one week from 54 to 56, while all the issues of bonds advanced to above 89.

to \$6, while all the issues of bonds advanced to above \$9. Ohicage, Milwaukee & St. Paul.

The La Crosse (Wis.) Republican says: "The big dam, or dike, now being built across the Mississippi River, about three miles above this city, by the Chicago, Milwaukee & St. Paul Rallway, is really an immense piece of work. Employment is given to 450 men and 60 teams. The embankment will be 1,600 feet in length, running from island to island, and well riprapped into each shore, through a depth of water of from 12 to 24 feet, making an average of 14 feet. The bulwark to this dam, or dike, is 'built of piles, a row of 200 in a straight line, which forms a kind of fence or stockade farmly linked together with heavy pieces of timber. Then be-

gins the sinking of mattresses, which is a new way or system of damming practiced by the Milwaukee & St. Paul Railway. It These mattresses are constructed in the following manner: First, a layer of brush, another layer of hay, firmly pinned together by four heavy planks at the top and four at the bottom. The mattresses are 16 by 20 feet square and two feet high. They are drawn into the water by a steam pile driver, when the throwing of stone upon them is commenced and continued until they are forced to the bottom and the stones reach the surface; then brush, hay, gravel and more stone are heaped upon them to a height of eight feet above the surface of the water. This work is very secure, and will not yield to the strongest pressure. It is calculated that time will only strengthen it. So far there has been no break, and only 250 feet remains to be done to complete the dam, which will be finished by Tuesday night. Two thousand rocks will be used in this dam.

"It is said and thought by some that this dam will be a serious obstruction to navigation in the vicinity of La Crosse, and that it will turn the heavy current of water around on the west said of Barron's Island. If it should do this, the Chicago, Milwaukee & St. Paul Railway Company will immediately dam the Minnesota channel and keep the water in its proper course."

Indianapolis, Bloomington & Westurn.

A circular issued by direction of the Receiver notifies all employees that he cannot be responsible for loss of time or damages resulting from injuries received while employed on the road, and that every employe, in accepting a position or employment, assumes all risk of accidents, and is expressly under road, and that every employe, in accepting a position or employment, assumes all risk of accidents, and is expressly under road, and that every employe, or otherwise, for any iajury to a position of the company hall be liable, under any circumstances, whether of his own negliment of the position of the road are too small and the liabilities of the company t

Assume all risk incident to the position and business.

Macon & Brunswick.

The act authorizing the issue of Georgia State bonds in exchange for the bonds of this company indorsed by the State failed to pass the Legislature. A bill was passed authorizing the issue of new 7 per cent. State bonds having 20 years to run to an amount sufficient to pay the interest due and falling due on the indorsed bonds which are now recognized by the State. The act extends also to the indorsed bonds of the North & South road.

The State board of directors has finally rejected the bids made for the lease or sale of the road, and the matter is referred back to the Governor, who will decide what action is to be taken.

kingsten & Pembreke.

At the annual meeting in Kingsten, Ont., Feb. 9, it was reported that the line was in operation from Kingsten northward to Sharbot Lake, 45 miles. The total cost has been \$916,916, of which \$128,559 was expended in 1875. Some trouble has arisen from the failure of the County of Frontenac to pay the bonus voted, but negotiations are in progress for a settlement. A bonus of \$3,750 per mile has been secured for 16 miles of the extension northward.

Augusta & Spartanburg.

A preliminary survey is to be made for a line from Spartanburg, 8. C., southward to Augusta, Ga., about 110 miles. Nearly enough has been raised along the line to pay for the survey.

RAILROAD LAW.

Carrier's Liability for Goods Taken by Legal Process.

In Yohe against the Ohio & Mississippi, the Indiana Supreme Court recently reaffirmed the doctrine that a common carrier may defend against a claim made by the shipper of goods by showing that the goods were taken from him by legal process. The carrier has no right to resist a writ legally presented, but must surrender the goods to the power of the State. The Central Law Journal says: "The court added to the rule the important qualification that in order to relieve himself the carrier must show that he gave to the consignees immediate notice of the seizure. Another distinction which might be taken would seem to be between a case of seizure under process coid on its face, and process which or merely erroneous. In the case of void process, where the officer and all assisting him would be trespassers, it might be proper to require the carrier to show that he had not yielded the goods without a contest. But still the distinction between void and erroneous process is often, perhaps, more refined than it is sensible or practical."

Liability for Drunkenness of an Employs.

trespassers, it might be proper to require the carrier to show that he had not yielded the goods without a contest. But still the distinction between void and erroneous process is often, perhaps, more refined than it is sensible or practical."

Liability for Drunkenness of an Employs.

The New York Court of Appeals, in Cleghorn against the New York Central & Hudson River Company, which was an action against a railroad company to recover damages for injuries to plaintiff caused by the negligence of its servants, held that evidence that the servant was drunk at the time, and that he was of intemperate habits, which were known to the agent of the company having power to employ and discharge such servants, was admissible in aggravation of damages.

Recovering Property in the Hands of a Receiver.

In Hills against Parker, the Massachusetts Supreme Court held that the owner of a locomotive engine may maintain replevin for it against the agent of a railroad corporation, whose property is in the hands of receivers, if the corporation had no interest in the engine, although it is used on the railroad.

Conditional Subscriptions to Stock.

In the Philadelphia & Chester County Company against Caley the Pennsylvania Supreme Court laid down the following principles:

1. Subscriptions made to the stock of a company before the procurement of the charter are to be held as absolute and unqualified, and any condition attached thereto is void. The commissioners appointed to receive such subscriptions are not agents of the corporation, for it is not yet in being; they are rather agents of the corporation, sating under limited powers defined by statute, which every one is bound to know. If any one be led by masrepresentations made by such agents it is his own the suitons.

An organized company, however, may rec ive conditional subscriptions are not agents of the corporation and is bound by such conditions. A porson who

tault.

An organized company, however, may rec ive conditional subscriptions and is bound by such conditions. A person who subscribes without conditions does so in view of the general powers conferred on corporations by the State, and he cannot, therefore, set up an unlawful act of the directors as a plea for non-payment of his subscription. Should he make a conditional subscription and the character of the contract be altered without his assent in a material point, actually, or by the intervention of a power beyond his control, such alteration makes his release from the subscription. An important alteration of the route of the road by act of the Legislature would be an instance of such intervention.

Railroad on a Public Streat.

be an instance of such intervention.

Railroad on a Public Street.

In Joliet, against the Chicago, Rock Island & Pacific Company, the Illinois Supreme Court held:

1. That the doctrine of equitable estoppel may apply to municipal corporations in regard of matters of public r ght.

2. That the use of public streets and public squares for the right of way of a railroad is a public and not a private use.

3. That the dedication of property to the public use as "public ground" is a dedication to an unrestricted use, and that the representatives of the public having control of the same may direct its application to any specific public use.

4. That the authority conferred upon the board of directors of the Chicago & Rock Island Railroad Company to locate the line was conferred upon them as the agents of the State, and that their location of such line was to all intents and purposes the act of the State itself. Also, that it conferred upon them the authority to locate the line across any public ground under the contract of the Legislature as the representative of the public, unless a previous application of the same property to another use raised a presumption of a restriction of the power conferred upon the board. And that the fact that the Legislature had directed the erection of the county buildings upon this square, under the circumstances of this case, did not raise such a presumption.

Express Companies' Receipts.

Express Companies' Receipts.

In a suit against the Adams Express Company involving the legal construction of a clause in the receipt limiting the company's liability to \$50, unless the value of the package shall be stated by the shipper at time of shipment, the United States (Circuit Court ruled that the receipt was a binding contract, and that as the plaintiff did not state the value of his shipment at the time of delivery to the express company the responsibility of the latter was limited to \$50, and the plaintiff could only recover that amount even though the actual loss had been occasioned by the negligence of the defendant.

could only recover that amount even though the actual loss had been occasioned by the negligence of the defendant.

Liability of Sleeping-Car Comp. nies.

In the United States Circuit Court at Memphis, Tenn., in the case of Blum against the Pullman Sou hern Car Company, which was a suit to recover \$4,000 alleged to have been stolen between Humboldt and Memphis, while Blum was a passenger and asleep on one of the sleeping cars of the defendant, Judge-Brown charged the jury that the sleeping-car company was not liable as imkeepers or common carriers like railroad companies, which was held by the Supreme Court of Indiana. The private boarding or lodging-house or restaurant is responsible as an innkeeper for the loss of goods by guests. The sleeping-car company must take reasonable care of guests and their property, especially while the guests are asleep. If the sleeping-car company was negligent, they became liable, and if the plaintiff was negligent as to taking care of his own property the company should not be held liable. The sleeping car company is liable only for such property as is usually carried about the persons of passengers, such as clothing, small baggage, and such amount of money as is necessary for traveling expenses. If the plaintiff loss was caused by the want of case on the part of the defendants, he should have a verdict for such reasonable amount for traveling expenses as the jury may deem necessary. The jury returned a verdict for the plaintiff for \$100.

Measure of Land Damages.

In McTerren a sinst the Mount Alto Company, the Pennsylvania Supreme Court held that, in a sunt to recover damages for land taken by a railroad company, it is proper to allow the company to submit evidence to prove that the plaintiff's land contains iron ore and that its value as such ore land had been increased by the new railroad to an amount exceeding the damages and the value of the land taken for the road.

nor and salem by a railroad company, it is proper to allow the company to submit evidence to prove that the plaintiff's land contains iron ore and that its value as such ore land had been increased by the new railroad to an amount exceeding the damages and the value of the land taken for the road.

Railroads in the New Texas Constitution.

The railroad article as finally adopted by theselexas Constitutional Convention in the Constitution just adopted by the people, is as follows:

Section 1. Any railroad corporation or association, organized under the law for the purpose, shall have the right to construct and operate a railroad between any points within this State, and to connect at the State line with railroads of other States. Every railroad company shall have the right to construct and operate a railroad between any points within this State, and to connect at the State line with railroads of other States. Every railroad company shall have the right to construct and operate or cross any other railroad; and shall receive and transport each the other's passengers, tomage and cars, loaded or empty, without delay or discrimination, under such regulations as shall be prescribed by law.

Section 2. Railroads heretofore constructed, or that may hereafter be constructed in this State, are hereby declared public highways and railroad companies common carriers. The Legislature shall pass laws to correct abuses and prevent unjust discrimination and extortion in the rate of freight and passenger tariffs on the different railroads in this State; and shall from time to time pass laws establishing reasonable maximum rates of charges for the transportation of passengers and freight en said railroads, and enforce all such laws by adequate penalties.

Section 3. Every railroad or other corporation, organized or doing business in this State under the laws or such original pass laws of original passengers and freight en asid railroads, and enforce all such laws by adequate penalties.

Section 5. No railroad corporation, books in

roads.
Section 9. No railroad hereafter constructed in this State shall pass within a distance of three miles of any county seat

at passing through the same and establishing and mag a depot therein, unless prevented by natural obstacl s streams, hills, or mountains; provided such town or s, shall grant the right of way through its limits, a ent ground for ordinary depot purposes.

ANNUAL REPORTS.

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|--------|--------|--------|---------|--------|-------|------|
| This | comp | any ow | rns a l | ine fi | om B | ride |
| the Ma | anach: | nette | line. | [4 mi] | es an | d if |

This company owns a line from Bridgepert, Conn., north to the Massachusetts line, 74 miles, and it works under lease the Berkahire Railroad, from the Massachusetts line to West Stockbridge, 22 miles; the Stockbridge & Pittsfield road, 22 miles; the West Stockbridge road, 24 miles, and the New York, Housatonic & Northern road, from Brookfield Junction, Conn., to Danbury, 54 miles, the whole forming a main line 110 miles long from Bridgeport, Conn., north to Pittsfield, Mass., with branches from Van Deusenville, Mass., to West Stockbridge, 104 miles, and to Danbury, Conn., 54 miles, or 126 miles in all.

For the year ending Sept. 30, 1875, the control of the stock-

| lows: | | | |
|----------------------|------|-------|-------|
| Passengers carried | | 27 | 8,338 |
| Passenger mileage | | 6.41 | 9 375 |
| Tons freight carried | | 21 | 5,707 |
| Tonnage mileage | | 14,36 | 8,979 |

The earnings of the road were as follows:

| 1874-75. \$104,550 Freight and milk | 1873-74. \$207,330 458,242 29,008 | Inc. or Dec. Dec \$12,780 Inc 1,429 Dec 1,219 | |
|--------------------------------------|--|--|--------------------------|
| Total earnings | \$694,580 464,884 | Dec \$12,570 Dec 5,048 | 1.8 |
| Total expenses \$409,356 | \$464,884 | Inc \$4,473 | |
| Net earnings | \$229,696 5,513 1,823 66.93 | Dec \$17,042 Dec 100 Dec 185 Inc 0.49 | 7.4 1.8 7.4 0.7 |

working expenses... 67.42 65.93 Inc.. 0.49 0.7 expenses and taxes.. 68.82 The income account for the year was as follows :

| Rentals of lessed lines \$79,859 15 Coupon interest 37,500 00 Other interest, etc. 21,504 29 | | |
|--|--------------------|----------|
| Net result of year Dividends on preferred stock | \$78,790 70,800 | 79 00 |
| Surplus | \$2,990 | 79 |

than at any time for the past six years.

Wilmington & Western.

This company owns a line from Wilmington, Del., to Landenberg, Pa., 20 miles. The funded debt is \$500,000, on which interest has been in default aince 1873. Foreclosure proceedings were recently begun and a receiver appointed.

The work done for the year ending Oct. 31 was as follows:

1874-75. 1873-74. Inc. or Dec. P. c.

1874-75.
Passengers carried......20,646
Tons freight carried......59 981 1873-74. Inc. or Dec. 24,142 Dec. 3,496 33,144 Inc. 26,837

| The earnings fr | | | follows: | 02.0 |
|------------------------------------|-------------------------|--------------------------------------|--|-----------------------|
| Gross earnings Expenses | 1874-75. \$41,267 42 | 1873-74. \$31,871 15 30,008 39 | Inc. or Dec. Inc. \$9,396 27 Inc. 4,596 01 | P. c. 29.5 15.5 |
| Net earnings Gross earnings per | \$6,663 02 | \$1,862 76 | Inc., \$4,800 26 | 288.0 |
| mile Net earnings per | \$2,068 | \$1,594 | Inc \$469 | 29. |
| mile Per cent. of ex- | 333 | .93 | Inc 240 | 258.0 |
| | | | | |

Total \$12,172 78
Back wages, accounts due, buildings, etc. 12,172 78

The appointment of a receiver was due to the fact that some suits were about to be brought which would seriously embarrass the company in operating the road. It was therefore deemed proper to notify the bondholders, who took action as

Utica & Black River.
This company works the following lines:

| Utics, N. Y., to Morristown | Miles, |
|------------------------------|--------|
| Theress Junction to Clayton | 15.97 |
| Carthage to Sackett's Harbor | 29.59 |

| 1874-75. Passengers\$201,879 38 Freight 263,095 84 Express, mails,etc 38,538 91 | 1878-74. | Inc. or Dec. | P. c. |
|---|---|--|--------------------------|
| | \$189,858 60 | Inc. \$12,020 78 | 6,3 |
| | 261,706 80 | Inc. 1,389 04 | 0,5 |
| | 33,290 40 | Inc. 5,248 42 | 15,8 |
| Total \$509,514 13 | \$484,855 89 | Inc \$18,658 24 | 3.8 |
| Working expenses 251,660 82 | 240,865 02 | Dec. 10,795 80 | |
| Net earnings \$251,859 31 Gross earn. per mile. \$3,497 Net | \$243,990 87 \$3,730 1,089 49.68 | Inc. \$7,862 44 Dec. \$233 Dec. 150 Inc. 0.30 | 3.2 6.2 7.9 0.6 |

amount paid in dividends was \$106,149 during against \$106,122 the previous year.

The report says:

"In November, 1874, under a lease made by and

The report says:

"In November, 1874, under a lease made by and between this company and the Carthage, Watertown & Sackett's Harbor Bailroad Company, we took possession of twelve miles of their read, extending from Watertown to Sackett's Harbor, on Lake Ontario.

"When the Carthage, Watertown & Sackett's Harbor Bailroad was completed to Watertown, it was leased to this company for 40 per cent. of its gross earnings, with a proviso that when completed to Sackett's Harbor this company should run the whole road, paying therefor \$75% per cent. of the gross earn-

ings, monthly. The road was bonded for \$300,000, interest at 7 per cent. which they were bound in the lease to pay. Failing at any time to do it, left it optional with us to take up the coupons or not. We have been compelled to take up these coupons, which, during the last current year, amounted to \$21,000; their percentage of gross earnings was \$19,088.34, leaving a balance for the year of \$1,911.66. At the close of the year the balance due from them was \$5,398.68.

Oleveland & Pittsburgh.

Uleveland & Pittsburgh.

This company owns a main line from Bochester, Pa. (26 miles from Pittsburgh on the Pittsburgh, Fort Wayne & Chicago), to Cleveland, O., 124 miles; the Biver Division, from Yellow Creek, O., to Bellaire, 42% miles; the Tuccarawas Branch, from Bayard, O., to New Philadelphis, 32% miles, 199% miles in all. The road is leased to the Pennsylvania Company, and the report presented at the recent annual meeting related entirely to the financial condition of the company.

The capital account at the close of the fiscal year, Nov. 30, 1875, was as follows:

 Stock (\$56,856 per mile).
 \$11,243,479.29

 Funded debt (\$25,866 per mile).
 5,160,343,68

 Balances of accounts, earnings, bills due.
 928,756.00

The current account for the year was as follows:

Received from lessee for rental, sinking fund, etc ... \$1,295,281 61

Dividends... \$786,898 51

Interest on bonds. \$87,680 00

Sinking fund... \$8,684 00

Maintaining organisation. 9,266 25

1,284,783 76

The lessee's report of earnings for the year has not yet been ecceived. All obligations under the lease have been promptly nd fully met.

West Chester & Philadelphia.

This company owns a line from Philadelphia to West Chester, 264, miles, and it works under lease the West Chester Railroad, from West Chester to Malvern, 9 miles. The business is mainly suburban; though there are some large factories on the line.

| The property is represented by: | |
|---------------------------------|------------------------|
| Stock (\$30,992 per mile) | \$821,300 1,100,000 |
| Total (\$72,502 per mile) | 81 921 200 |

The earnings for the year ending Oct. 31 were as follows: Passengers 1874-75. 1873-74. Inc. or Dec. \$2205.224 19 \$225.406 09 Inc. \$818 10 Freight 112,789 24 112,714 02 Inc. 69 22 Mails, rents, etc. 8,451 82 7,262 62 Inc. 1,180 20

 Net earnings
 \$152,657 95
 \$147,949 25
 Inc.
 \$4,688 70

 Gross earn. per mile
 \$9,788
 \$9,729
 Inc.
 \$88,729

 Net
 4,299
 4,170
 Inc.
 129

 Per cent. of expenses
 66,08
 67,13
 Dec.
 1,06

Per cent. of expenses. 56.68 87.18 Dec. 1.65 1.8

The fact that there has been no decrease during the year is considered encouraging. The report says: "The road and all the property have been kept in good repair, and with, the improvements made as suggested by the Superintendent, the condition of their property will doubtless be satisfactory to the stockholders. A lot has recently been secured to place a turntable at Media, that some trains may be run to that point only, and not be compelled to go farther than is required, as is now the case."

the case."

There has been expended on construction account \$14,207, of which \$3,000 was for addition to West Chester depot; \$11,090 increased cost of steel over iron rails, and \$177 net, addition to equipment. An increased passenger traffic is expected during the current year.

Knex & Lincoln.

This company owns and works a line from Bath, Me, west Rockland, 49 miles. It is equipped with 5 engines and 69 car The property is represented as follows:

 Stock (\$7,440 per mile)
 \$364,580

 Bonds (\$48,878 per mile)
 2,395,000

 Total (\$56,318 per mile).....\$2,759,580

The bonds are all city and town bonds issued in aid of the road, the interest on which the company pays so far as possible, the municipalities which issued the bonds making up the deficiency. The road was a costly one to build, requiring much rock-cutting and other expensive grading.

The work done, so far as reported, for the year ending Dec. 31 was as follows:

| l | Passengers carried Tons freight carried | 1875. 98,377 30,497 | 1874. 108,914 32,980 | Decrease, 10,537 2,463 | P.o. 9.7 |
|---|---|---------------------------|----------------------------|------------------------------|-------------|
| ١ | The freight carried incluings for the year were as follows: | ded 18,000 lows: | tons of | ice. The | earn- |

| 1875, | 1874, | Inc. or Dec. | Gross earnings......\$146,214 37 | \$161,568 93 | Dec. \$15,384 56 | Working expenses.... 72,198 02 | 78,725 56 | Dec. 6,527 54 \$82,843 57 Dec. \$8,827 02 \$3,297 Dec. \$313 1,691 Dec. 180 45.73 Inc. 0.60 Net earnings \$74,016 38

Net "Per cent. of expenses.. Included in expenses is the loss of \$4,000 worth of wood de-stroyed by fire; the stock of wood on hand at the close of the year was also \$2,000 greater than the previous year. The di-rectors think that the cities and towns interested will have to raise about \$60,000 this year to make up deficiencies in in-terest.

Pittsburgh, Titusville & Buffalo.

This road, formerly the Oil Creek & Allegheny River, consists of a line from Irvineton, Pa., south by west to Oil City and thence nearly due north to Corry, being 95 miles in all and in the form of two sides of an acute-angled triangle. There is also a branch from Titusville to Union, 25 miles, eight miles of which is really identical with the main line, and the Plea-

Total bonded debt (\$35,392 per mile).,.... 4.070.000

| | 187 | | 1874. | | | or Dec | | |
|-----|--------------------------------|------|-----------|----|------|----------|----|------|
| 0 | Gress earnings\$809,79 | 6 01 | \$846,851 | | | \$37,085 | | |
| | Working expenses 570,87 | 5 96 | 562,119 | 68 | Inc. | 8,756 | 18 | 1.6 |
| ć | Net earnings\$238,92 | 0 15 | \$284,782 | 04 | Dec. | \$45,811 | 89 | 16.1 |
| a | Gross earn'gs per mile. \$7.04 | 2 | \$7,364 | | Dec. | \$322 | | 4.4 |
| - | Net 2 07 | A | 2,476 | | Dec. | 398 | | 16.1 |
| Ph. | Then + - 6 | n | 66.99 | | Ima | 4.19 | | 6.5 |

rer cent. of expenses. 70.50 66.38 Inc. 4.12 6.2

The earnings for several years past have shown a steady decline, due mainly to the transfer of the center of oil production from the territory served by the road to the new Butler oil fields. This decline was somewhat checked last year, the decrease in gross earnings having been less than for several years previous. The road was formerly a very prosperous one and paid dividends for several years, two years as high as 10 per cent., and one 12½ per cent. The following table shows the gross and net earnings for five years past:

| | * | | | | | | | | | | | | | | | | | | | | | | | Grees. \$1,675,009 | • | Net. \$651,502 |
|-----|----|---|--|-----|---|---|-----|-----|-----|--|--|-----|-----|---|---|-----|-----|---|-------|-----|---|-------|------|-----------------------|---|-------------------|
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | 461,531 |
| 171 | 1. | | | | | | | | | | | | | | 0 | 0 0 | | 0 | 0 | | | | | 1,067,734 | | 342,738 |
| 174 | Į, | | | 0.1 | 0 | 0 | 0 1 | 0.0 | 7.0 | | | | . , | 0 | | 0 1 | . , | | 0 | 0 | 0 | | | 846,852 | | 264,732 |
| 371 | 5. | 9 | | | | D | | | | | | 0 0 | | | | | | | 9 | 0 1 | | 0 | 0 | 809,796 | | 238,920 |

The year 1875, therefore, shows a decrease from 1871 of 51.7 per cent. in gross and of 63.8 per cent. in net earnings.

It will be seen that the net earnings last year were \$42,580 less than the present interest charge, or \$22,180 less, if we disregard the interest on the income bonds.

Detroit & Milwaukee.

Detroit & Milwaukee.

This company owns a line from Detroit, Mich., west by north to Owosso and thence nearly due west to Grand Haven on Lake Michigan, 180 miles. There is a bonded debt on the road of \$7,123,088, or \$37,688 per mile, not including overdue coupons. Interest is in default except on \$805,136 of underlying mortgages on the roads which were consolidated to form the present line. Proceedings are now in progress to foreclose several of the mortgages, and the property has been for some time in the hands of a receiver, who makes the following statement for the year ending Dec. 31:

Errnines: 1878.

 year ending Dec. 31:

 Earnings:
 1875.

 Passenger:
 \$371,500 04

 Freight:
 478,318 71

 Mails and express:
 38,815 78

 Rents:
 14,012 18
 1874. Inc. or Dec. P. c. \$448,625 66 Dec. \$77,125 62 17.2 641,938 71 Dec. 165,620 00 26.5 41,647 30 Dec. 2,831 52 6.8 18,995 03 Dec. 4,962 87 26.2 Total\$902,646 69 Mainte'snce of way \$251,620 35
Motive power..... 208,514 36
Mainte'ance of care. 104,112 80
Conducting trans. 219,987 08
General charges... 27,989 18 \$248,786 68 Inc.. \$2,834 67 1.1 213,969 56 Dec.. 5,455 20 2.5 135,563 03 Dec.. 31,470 23 28.2 266,892 31 Dec.. 46,905 23 17.6 36,881 22 Dec.. 8,892 04 24.1 Working expen's. \$812,223 77 axes and insur'ce. 56,237 51 \$902,111 80 Dec.. \$89,888 03 42,360 45 Inc.. 13,877 06 \$944,472 25 Dec.. \$76,010 97 8.0 Net earnings \$34,195 41 \$206,734 45 Dec.. \$172,549 04 83.5 Total expenses... \$868,461 28 91.6 83.5 78.36 Inc. 11.62 14.8 17.3 82.04 Inc. 14.17

Free Passes.

[From the Seventh Annual Report of the Massachusetts Railroad Commissioners.]

(From the Seventh Annual Report of the Massachusetts Railroad Commissioners.)

The subject of free passes over railroads has recently attracted much public attention. With a view to ascertaining the extent to which the practice of granting these passes had been carried, a series of interrogatories were addressed to the several corporations. The answers will be found printed in Appendix C of this Report. In examining these answers, it is necessary to bear in mind that the great majority of exchange complimentary passes are never used. They are sent by the corporations to each other, but, except in the case of some trunk lines, the officers receiving them rarely have occasion to pass over the lines on account of which they are issued.

It will be seen that the practice as regards passes varies greatly. Each corporation lays down a rule for itself, which soems in some cases to be quite stringent, and in others extremely lax. The Boston & Albany, and the Fitchburg roads, for instance, seem to have kept a strict account, and to know, with some degree of accuracy, how many passes have been issued, and the extent to which they have been used. The same is true of the Boston & Maine, and Boston & Lowell, although not to the same extent. Many of the other corporations seem, however, to have practically kept no record at all, especially of trip passes, and to be unable to give any definite information on the subject. It may fairly be regarded as matter for surprise that at this late day a matter of so much importance as the free use of their roads should have apparently excited in little attention on the part of such a number of railroad officials.

The whole system should be broken up, though this probably cannot be done by law. The true rule would be for the conductor of a train to take up a ticket from every person on it, except the train hands. He should not be allowed to receive fares on the cars without is return giving a ticket, which is subsequently should take up as a train ticket. Employes, from the highest to t